IRELAND
THE OUTPOST

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'THE GROWTH OF EUROPE', ETC.

'For it is a boterasse and a poste.'
Libelle of Englyshe Polycye, 1436.

PREFACE

THE essay that follows is based on two lectures given in the summer school of University College, Aberystwyth, in 1917, and on a lecture to the Irish Geographical Association in Dublin in 1919. It is an attempt to regard Ireland as the outpost of a larger region, from which her people and her civilization have been derived in successive and overlapping waves. The study of natural surroundings, and of their action on various groups of organisms, is the true field of the geographer, who hopes in time to break the barrier that has been set in university courses between the sciences and the arts. Our educational systems have long been controlled by the ' left, right, left, right ' of classical and mathematical drill-sergeants, and much that is intensely human has remained foreign to ourselves. A realization of the physical structure of Ireland, and of her position as the outpost of Eurasia, may lead to a wider comprehension, not only of the land, but of its complex population. The geographer borrows from the geologist, and he owes an equal debt to the anthropologist and the historian. However localized his theme may be, he must, through intercourse and travel, maintain his outlook on the larger world. The sections of this essay are not intended to furnish a continuous history of the outpost ; they illustrate from various points of view, now bounded by a territorial horizon and now of wider scope, the influence of geographic conditions on the current of affairs in Ireland. If the presentation is a true one, the nine sections

should lead to one conclusion ; but I would ask the reader to draw that conclusion for himself.

Ireland has lain in the path of great migrations, from Berber Africa, from the mouths of Frisian rivers, from the viks and fjords of the sterner northlands. From her own drowned valleys, the harbours that knew the ships of Gades and of Gaul, her people have moved westward and linked the old world with the new. At times she catches the light that floods across from Europe, and adds to its brightness the ardent glow of her response. At times the sea-mist gathers along her mountain-barriers, and she sinks back into the haze of the Atlantic, elusive as the Fortunate Isles.

G. A. J. C.

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The illustrations are from photographs by the author.

MAPS

*These maps contain the names of practically all the Irish
places mentioned in the text.*

IRELAND THE OUTPOST

I. IRELAND ON THE GLOBE

NATURE allows no 'self-determination' to any point on the surface of the globe. An isolated volcanic peak rising from oceanic depths is washed by a stream-current that conforms at its place of origin to continental shores. It is swept by winds that can be traced into the trade-zones, or perhaps to the whirls of air around the poles. A patch of desert in the centre of a continent, where the streamlets, as mere intruders, die away in deltas of brown sand, leads our thoughts along the ravines and across the hill-crests to fertile lands that feel the rain. The study of a limited area may, for scholastic reasons, be carried outwards from the homestead to the globe; but to comprehend the homestead and its home-folk, from the thatch of the roof to the colour of the children's hair, we must find the locality on the domed surface of the earth, and must realize that this earth is a very large and dominant region round it. In fact, if we start from the house and come full circle round the globe, we shall have gone 25,000 miles before we reach its door again.

The text-books will tell us that Ireland lies between certain parallels of latitude and certain lines of longitude on the surface of this great rotating ball. A true picture of the earth should, then, always stand near us, a globe and not a map. The old masters, who loved emblems in their art, placed a skull beside the religious and a globe beside the philosopher; the latter, whatever his future outlook, could at any rate appreciate the fullness of the earth. We may do well, then, to regard from outer space the position of Ireland on the globe.

Ireland is seen to be an island, lying farther north than Newfoundland, but set on the warm side of the Atlantic. The prevalent winds from the south-west, themselves warmed by passing over water not far from the limits of the Gulf Stream, push forward a body of this water as a drift-current that spreads into the arctic seas. In our summer, the marine ice melts back as far as Spitsbergen, and the whole western edge of Europe gains warmth from the region of the Azores. Storms may beat and rain may fall somewhat freely on the Atlantic shores of Ireland, but there is much to be said for her uniform climate, despite her variable weather. The whole island is affected by changes of pressure that take place over the borderlands of the European continent, and these lead to frequent disturbances of the general flow from the south-west. Prolonged storms, connected with Atlantic cyclones, or fine episodes lasting over two or three weeks, may occur in any month of the year, and this uncertainty of conditions imparts a sporting character to the agricultural operations that are the main industry of the country. On the other hand, man is never driven from his homestead by a succession of arid seasons or by the long persistence of inundations. Some of the wettest lowlands will feed abundant cattle for the export trade. The peat-bogs that developed when the rainfall was greater than at the present day are now drying and cracking on the upland areas, and are being reduced greatly by the sweeping winds. Where they are less exposed, as on the surface of the great limestone plain, they furnish a cheap and easily won fuel. With a roof above him for shelter in the days of storm (fig. 6), the peasant may be tolerant of the climatic conditions even in Kerry or the west of Galway; he needs no rainbow to assure him that the sun will ultimately

The climate.

shine. With a house that he can call his own, and a few acres of land round it, he may continue to live simply, but may be at once content and prosperous. The general mildness of the Irish climate has probably been an attraction to discoverers and invaders, accustomed to long months of drought in lands south of the Mediterranean, or to rain-drifts that turned to snow against the Scandinavian hills. Even the east winds that occasionally sweep over Europe from the steppes are broken and kept from Ireland by the mountainous west of Britain. North winds are frequent on the Ulster coast, and bring sudden changes of temperature down to the plain-land of Kildare, such changes being especially noticeable in the months of May and June. On the other hand, the general moist warmth of the south-western counties is often oppressive to the stranger, and exerts a restraining influence on the activities of a tall, well built, and intelligent population.

Though Ireland has its own characteristics, the island is by no means isolated. Just as the Lofotens are part of Norway, the British Isles are part of the drowned coast of Eurasia. Europe, omitting Russia, is a small north-western offshoot of the continental mass that stretches from the Iberian plateaus to the mountainous salient of Shantung. The great lines of structure that were developed in the broad region of Asia in Cainozoic times can be followed into the promontory-lands of Europe. In the far west, these lands converge, as it were, on Ireland, which is thus the last outpost of Eurasia against the oceanic depths of the Atlantic. The structural axes traced from Asia into Europe run on into the outpost, and the fact that it is an island, and its proximity to the larger island of Great Britain, are the two fundamental geographic influences on the course of Irish history.

Relation of Ireland to Eurasia.

TABLE OF DIVISIONS (ERAS AND PERIODS) OF GEOLOGICAL TIME

QUARTARY OR QUATERNARY ERA.

RECENT. The Irish land-area becomes finally an island.

GLACIAL. The Ice-age.

CAINOZOIC OR TERTIARY ERA.

PLIOCENE. The Irish area is terrestrial, with insular tendencies at the close.

MIOCENE. *Formation of the Alpine Chains.*

OLIGOCENE. Volcanic period in the region of north-eastern Ireland and the Hebrides.

EOCENE. The Irish area is terrestrial.

MESOZOIC ERA.

CRETACEOUS. The Chalk sea invades the Irish area.

JURASSIC. The Lower Jurassic sea invades the northern Irish area.

TRIASSIC. Semi-arid period in the Irish area. Extensive denudation of Armorican land.

PALAEOZOIC ERA.

PERMIAN. Limited marine invasion in the northern Irish area.

CARBONIFEROUS. Deposition of the grey limestone in an extensive sea, followed by an uplift allowing of the spread of coal-forests. At close, *formation of the Armorican Chains.*

DEVONIAN. Semi-arid continental period in the Irish area. Formation of the Old Red Sandstone during extensive denudation of the Caledonian land.

GOTLANDIAN (UPPER SILURIAN). Marine deposits. At close, *formation of the Caledonian Chains.*

ORDOVICIAN (LOWER SILURIAN). Marine deposits.

CAMBRIAN. Marine deposits in the eastern Irish area.

PRE-CAMBRIAN ERA.

Altered marine sediments and crystalline igneous rocks, now found remoulded and worked up into the Caledonian Chains.

II. THE FOUNDATIONS OF THE OUTPOST

IN the north-east of the county of Antrim, an antique group of gnarled and crumpled rocks, including highly altered sediments and granites, has been exposed by the removal of the basaltic lavas and the chalk. In the county of Londonderry, and still more conspicuously as we go westward into Donegal, the same group forms a great part of the country. The trend of the earth-folds in this area is north-east and south-west ; if we follow this trend from the sea-board, it leads us to the Grampian Hills and to the Great Glen that provides a waterway across Scotland (map 3). We pass on into Europe, and the same lines of structure are at once apparent in the snow-capped backbone of Scandinavia (map 1).

We have here, in these highly altered and crystalline masses, the relics of a great continent that once stretched across to Canada, in what is called the Devonian period, when fishes were the dominant creatures in lakes and seas, and when nothing much more noble than a scorpion moved upon the surface of the land. This Devonian continent has been styled ' Caledonian ', on account of the control exercised by its system of folding on the structure of the Scottish highlands. *The Caledonian continent.*

The heather-clad ridge of Slieve Camph or the Ox Mountains, and the pallid domes of Mayo and Connemara, worn by frost and rain out of ancient and resisting sand-stones, are a portion of this continental mass. Throughout the west of Ireland, extensive intrusions of granite have still further emphasized the moorland character of the uplands, and in the south-west a huge granite bar, which oozed in its former molten state into one of the north-

easterly upfolds, has weathered out as the axis of the
Leinster Chain (map 2). On its flanks, the remains of
the long arch or crust-tunnel in which it was moulded
are seen in the slaty rocks that lie on the east side between
it and the sea, and on the west side between it and the
limestone levels of Kildare. The streams fed by cloud-
drift on the upland have washed out broad open basins
on the crumbling surface of the granite, and, as they
become more concentrated, have cut steep ravines across
the stratified series on the margins (fig. 5). There is
a striking contrast between these wooded glens and the
inhospitable moorland at their heads. The backbone of
Leinster bars out for eighty miles the interior of the
country from access to the eastern sea. Even the natural
gates of Wexford and Waterford, on the drowned valleys
of the Slaney and the Suir, were limited as means of
entry to Ireland by the proximity of a race bred in the
Leinster highland. The broad inlet of Dublin Bay,
where the granite is outflanked by the limestone of the
plain, affords, as we come up the channel from the south,
the first free way to the interior.

The Old
Red
Sand-
stone.
Throughout the Devonian period, denuding forces were
active on the surface of the Caledonian continent, and
semi-arid conditions are believed to have prevailed. In
desert-areas, reddish and purplish sandstones were formed,
where the waste products accumulated as broad cones at
the feet of the decaying hills. Occasional floods, operating
over wide areas of sun-dried detritus, spread beds of
pebbles across the lowlands, and here and there more
regularly stratified sands and muds were laid down in
shallow lakes. These Devonian deposits are now
cemented into rocks of high resistance, and the whole
system of strata is styled the Old Red Sandstone.

In time, however, the continental surface sank, admit-

FIG. 1. THE CENTRAL PLAIN OF IRELAND. From Slieve Bawn, near Strokestown.

FIG. 2. BEN BULBEN, CO. SLIGO. Limestone scarps and peat-covered lowland.

ting the sea gently across the delta-flats of the Upper
Old Red Sandstone.   A shore remained across Donegal
and central Scotland ; but the deeper and purer water to
the south encouraged a rich growth of marine organisms
over nearly all the Irish area.   The abundance of corals,
sea-lilies, and shell-fish in the Lower Carboniferous epoch
led to the formation of a great thickness of limestone,
a rock easily attacked by weathering and soluble in natural
waters.   Hence, over most of the limestone area, long
wasting of the surface has produced a lowland (fig. 1), **The**
the great central plain of Ireland, offshoots of which, **central**
proving the former extension of the limestone, stretch up **plain.**
among the western hills.   The modern seas have cut
into the plain on the west at Galway and Donegal Bays,
and on the east between the Liffey and the Boyne.   Near
Sligo, however, which is one of the most beautifully
placed cities in our island, masses of the upper beds of
limestone still remain 1,500 feet above the sea, and their
huge vertical scarps, like those of the Pennine Chain, are
superposed on the earlier features of a singularly romantic
country (fig. 2).

As the ' Carboniferous ' sea gradually shallowed, sands
and shales replaced the limestone, and ultimately swampy
land appeared, on which the forests of the Upper Carbo-
niferous epoch spread.   A second system of earth-folds
then crumpled the region of western Europe, the thrust
coming this time from the south.   The prevalent structure
of southern Ireland is due to this epoch of earth-move-
ment.   From the Atlantic coast to Waterford (map 4) **The**
the folds run east and west, and the limestone, exposed **Armori-**
on the upfolds and caught in the downfolds, has been **can fold-**
worn away more easily than the underlying Old Red **the**
Sandstone.   Hence the rivers of southern Ireland have **system of**
worked their way along the downfolds, leaving ridges of **Ireland.**

the harder and barren sandstone rock between them.
These rivers began their history on a fairly uniform
surface, which had been planed across the stratified mass
by long ages of denudation.   The Upper Carboniferous
strata, with their forest-beds converted into coal-seams,
were gradually but generally removed ; and the thick
mass of grey limestone became attacked throughout the
folded region.   The tilt of the fairly even surface of
denudation that was thus developed was southward, as
we may judge from the courses of the Shannon, the
Nore, the Barrow, and the Slaney, and from the lower
courses of the Blackwater and the Lee (see maps 2 and 4).
In the working down of the formerly smooth surface over
the crumpled southern lands, the tributaries of these
southward-running streams have cut their way back
farther and farther westward along the downfolded
portions of the limestone, which became their natural
field of operations as the underlying structure was etched
out.   Many of the southward-running rivers, the original
streams 'consequent' on the general slope of the country,
have been cut across and tapped by the growing tribu-
taries of those lying eastward of them ; their upper
waters have in consequence been drawn off along the
capturing tributary to a more eastern outfall, while their
lower courses have been ' beheaded '.   Where one of the
lower portions has survived, it may now appear as the
mere concluding reach of one of its own tributaries ;
it runs at right angles to the course of the 'subsequent'
tributary, which has assumed predominant proportions
along the limestone groove.   J. B. Jukes,[1] when director of
the Geological Survey of Ireland, gave the first systematic

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[1] ' On the Mode of Formation of some of the River-valleys in
the South of Ireland ', *Quart. Journ. Geol. Soc. London*, vol. xviii,
p. 378 (1862).

account of the relation of the rivers to the former surface and to the underlying structure of the south, and his carefully reasoned paper has served as a classic model for observations on what is now known as 'river-capture'.

The net result, then, of the crumpling that took place in late Carboniferous times, combined with exposure to weathering during several later epochs, has been the production of a series of valleys, in which woodlands gather, and in which tillage can be carried on in somewhat stiff clay soils. The walls of these valleys are formed of barren moorlands, set with ledges of grey and purple rock. The structure is well realized when we ascend the Knockmealdown range from the plain at Clogheen, west of Clonmel, by the pass that leads over to Lismore. The vale of the Blackwater to which we then descend from the Old Red Sandstone ridge repeats along its narrow limestone floor the features of the great plain that we left behind us in the north.

In Kerry and the west of the county of Cork, the residues of limestone are still more limited, and the Old Red Sandstone asserts itself in the serrated ridge of Carrauntoohil, in the deeply-dissected mountains of Killarney and Glencar, and in the desolate moor of Gouganebarra. Six miles south of the railway from Killarney to Cahersiveen, we may find ourselves in tangled forests where the only passage lies along the guiding streams. Then, through some notch of the grey crags (fig. 8) we may pass to a further downfold, where a strip of soft shale or limestone has produced a sudden contrast, where the land has long invited settlers, and where the white farmsteads are grouped along a natural highway that leads westward to the sea.

The continent recorded in this second series of European earth-folds is styled ' Armorican ', from the jutting relic

of it still exposed in the wind-swept promontory of Brittany. This relic is paralleled in Cornwall, and Armorican land rises boldly in the South Wales coalfield and in the terraced Brecknock ranges that bound the valley of the Usk. A patch remains as the Mendip Hills, and borings have shown us that a ridge comparable with those of southern Ireland underlies London and connects England with the Ardennes. Away in the heart of modern Europe, the Europe of late Cainozoic times, blocks of this far older Armorican continent form the Vosges, the Schwarzwald, and the Slavonic stronghold of Bohemia, while Armorican masses, long buried under younger strata, have been caught up and reared to dangerous eminence, towering to-day as the noblest features in the young earth-folds of the Alps.

The connexion of southern Ireland with the Cornwall of Arthurian romance, and across Cornwall with the land of Iseult the maiden-wife, is, then, far more than a matter of human story. The Armorican continent, however, has become broken like the fragments of an ancient tale, and remains a mere palimpsest for the earth-records of far later times.

In the course of geological ages, the Cretaceous sea began to spread over all this region, depositing white chalk in its pure water, and sandy beaches in addition in the north of Ireland. Once more the invading ocean from the south-east was checked on the stubborn hills of Donegal ; but at the opening of the Cainozoic or Tertiary era chalk must have covered a considerable part of eastern Ireland. The uplift of the sea-floor, and the consequent development from Ireland to Scandinavia of rolling downs of chalk, like those remaining as the Salisbury plateau at the present day, was the first act in the growth of modern Europe.

The warped and rising land cracked open. Through hundreds of vents, basaltic lavas flowed from the depths where rocks lay molten in the crust. They filled and flooded over the hollows of the downs, destroying the vegetation, levelling up the country, and converting it into a rugged waste. These conditions extended northward beyond the region of the Faroes, and they have prevailed in Iceland to the present day. The volcanic outbreak in Ireland heralded the vast movements that shattered the Armorican floor, folded and overfolded Mesozoic and Cainozoic strata in the Pyrenees, the Alps, and the Carpathians, and sent the waves of their groundswell across France and England to the western margin of the outpost.

The outpost land, however, was not again submerged, and it was closely held by the new continent of Europe. It is true that the extension of the Atlantic Ocean began to threaten its existence on the west ; but the Irish Channel and the North Sea are very modern features. Some of the invertebrate animals still found in Ireland may have entered the area by land in late Pliocene times and may have survived the Glacial cold on ground now lost to us in the west. The comparatively recent date of the movements that have determined the present boundaries of Ireland is well seen from the geological evidence in the south-eastern area. A plane of denudation had been worn across the folded rocks of Waterford, Pembroke, and Cornwall, probably with the aid of the early Pliocene sea. An uplift followed, which allowed the streams that wandered on this surface to convert their valleys into gorges in maintaining their connexion with the sea. Then a downward swing occurred, and the opening of the cold Glacial epoch found these young valleys partially drowned and marine water already in the Irish Channel.

A long glacier that came down between England and Ireland from the north drove out the sea before it, and carried mud and sand, enclosing foraminifera and molluscan shells, to heights of more than 1,500 feet across the bordering lands. The ice-sheets that occupied the interior of Ireland profoundly modified the surface, as became apparent when they finally melted and shrank back. The rock-floor was polished and scratched by the stones and sand carried in the ice; but this 'englacial' material, together with a vast quantity of clay, representing all that was loose or could be loosened on the land-surface over which the glaciers moved, was left as the solid residue of the composite mass that we call an ice-sheet. This 'boulder-clay', or more strictly 'boulder-loam', often remains as a thick deposit, levelled on its surface by flooding waters from the ice-edge and by the subsequent sweep of wind and beat of rain. In other places, where it was irregularly distributed in the ice, the boulder-loam forms steep-sided hills, elongated in the direction in which the ice-sheet moved. These hills, to which the name 'drumlin' has been restricted,[1] may be more than a hundred feet in height (fig. 7). Lakelets gather between them, and the post-Glacial streams have been forced to take winding courses round their margins. In addition, the rivers that ran beneath the melting ice have left casts of their channels in the form of ridges and elongated mounds of roughly stratified sand and gravel, along which many of the early road-tracks have been carried. These ridges are now well known to geologists as 'eskers', and the almost continuous series, the Eisgir Riada, that can be traced from Galway Bay

Boulder-loam.

[1] Maxwell H. Close, ' Notes on the General Glaciation of Ireland ', *Journ. R. Geol. Soc. Ireland*, vol. i, pp. 211 and 212 (1867).

to near Dublin was selected about A. D. 125 by the rival kings of north and south as a line of division across the island.

When warmer times returned, an upward swing of the uncertain continental edge had again joined Ireland with Britain and the mainland, and peat and forest spread over wide areas that are now submerged. The great deer, *Cervus giganteus*, which is now extinct, roamed from the Atlantic shores of Ireland into Baltic lands. The connexion between Great Britain and Ireland was probably severed before early man came into the outpost. The great low-lying delta between Britain and Scandinavia, on which the Thames was tributary to the Rhine, became also invaded by the sea, and the passage, where eighteen miles of water have controlled our English history, was carved by wave-action,[1] on the course of an earlier valley, between the newly formed North Sea and the English Channel. Great Britain was thus also marked off from the Continent, and Ireland, as an island beyond an island, became still more emphasized as the outpost. *The outpost becomes an island.*

To understand, then, the present position of Ireland in the economy of Europe, and the natural regions of Ireland in regard to one another, we must realize that the country and these natural regions have been moulded by a long series of changes that affected an area much more extensive than the outpost. The early movements that we call 'Caledonian' gave us the intractable highlands of Connaught and Donegal, the stubborn slate-strewn fields of Down, and the forbidding barrier of Leinster that guards the plainland on the east. The *Summary.*

[1] Perhaps along a valley caused by the overflow of a lake formed on the front of the shrinking North Sea ice, as suggested by P. F. Kendall in ' The British Isles ', *Handbuch der regionalen Geologie*, Band iii, Abt. 1, p. 310 (1917).

B 2

inflow of the Carboniferous sea furnished the limestone that prevails across the central plain. The mountain-rim was completed in the south by the 'Armorican' wrink-

MAP I. IRELAND IN RELATION TO GREAT BRITAIN AND NORTH-WESTERN EUROPE.

lings of late Carboniferous times. In the Cainozoic era, the high plateaus of Antrim were superposed upon milder domes of chalk, while the block of the Mourne Mountains was added to the country, where one of the cauldrons of

molten rock cooled down as a mass of granite under its cover of Silurian shales. From Triassic times onwards, denudation has swept from the country nearly all the Coal Measures that once stretched above the limestone of the plain. In compensation, this limestone, and much of the Old Red Sandstone uplands in the south, have been covered by boulder-loams, deposited as the ice-sheets of the Glacial epoch melted, and the dry cold episode that for a time drove life out of the area has in the end largely contributed to the fertility of Irish land.

The final earth-movements that established Ireland as an island left her with high ground on her margins, and with natural harbours formed by the drowning of valleys that led up far among the hills. Where the sea has reached inwards against the limestone plain, still more serviceable gates occur. Galway and Sligo on the Atlantic, and Dublin Bay, opening towards the parent lands of Europe, form effective breaches in the sheltering girdle of great hills.

Neither here nor in Britain has true geological stability been achieved. The raised beach at Larne, whence the steamers start for Scotland, contains chipped flints side by side with marine mollusca, and thus shows that an uplift of some 20 feet has occurred on the north-east coast since man settled in the country. We have no proof that the west of Ireland has been lowered since the epoch of the submerged forest-beds; but the legends of lost isles may well have had an origin in human observation. The traditionary island of Brasil appears somewhere in   Brasil. the position of the Porcupine Bank in a French manu- script chart drawn about 1660.[1] This record was made

[1] W. Frazer, 'On Hy Brasil', *Journ. R. Geol. Soc. Ireland,* vol. v, p. 128 (1879), where the date 1640 is suggested. Also T. J. Westropp, ' Brasil and the Legendary Islands of the North Atlantic ', *Proc. R. Irish Acad.,* vol. xxx, sect. C, p. 223 (1912).

when the Strait of Dover was closed to the Netherlands
during war, and when Dutch ships bound for the Indies
reached the Atlantic round the north of Scotland.   The
belief in Brasil descended to the cartographer who
recorded Nelson's voyages in 1815 ; but the location had
by this time shifted southward.   The Porcupine Bank is
formed, as dredgings have shown us,[1] around a core of
rocks similar to those of Carlingford.   Though it now
lies 500 feet below the surface of the sea, it once rose as
an isle beyond the outpost, and subsidence, combined
with the Atlantic scour, may have involved it in recent
and somewhat swift destruction.

The west coast of Ireland still suffers from the tremen-
dous surge of the Atlantic.   The sharp cones of Tearaght
and the Skelligs attest the undermining and flaking action
of the waves.   The level shelves of Clare and of the Aran
Islands are being lifted from one another, slab by slab.
The dome of Croaghaun in Achill has been cut back to
its very heart ; and away in the north, on the quartzite
mountain of Slieve League, the noblest cliffs in our
islands rise 2,000 feet from a sea where few ships venture.
The size of these huge rock-walls is scarcely realized
until the clouds gather at evening half-way between their
crowning edges and the restless foam-ring at their feet.
Yet, in face of all this battery, Ireland remains as a
coherent geographical entity, bounded by a strong frontier
on the sea.   Like Verdun, the outpost ' tient toujours '.

[1] G. A. J. Cole and T. Crook, ' On Rock-specimens dredged
from the Floor of the Atlantic ', *Mem. Geol. Surv. Ireland* (1910).

III. THE PEOPLING OF IRELAND

To the early venturers, and even down to the days of steam-navigation, there was a marked difference between the ocean and the ' narrow seas '. , When forests prevailed across the mainland, and only the higher uplands and the coastal fringes enjoyed the sunlight, continuous routes for travel could best be found along the sea.[1] After the close of the Glacial epoch, the north-western prolongation of Eurasia dipped, as we have seen, towards the Atlantic, and a part of its low peat-covered ground became submerged. The marine band of the Mediterranean formed a sound between Alpine Europe and Alpine Africa, a survival from the larger ' midland sea ' that once stretched eastward over India. On the north of the new Europe, the sea had entered between Britain and Scandinavia, flooding the joint delta of the Humber, Thames, and Rhine, and had found an outlet southward by the Strait of Dover. After man had settled in the Danish region, subsidence opened a channel from the North Sea to the Baltic ; and hence, as human communications grew, the ships of the Levant, laden from the caravans of Baghdad, could transfer their bales to reindeer-sleighs at Torneå. There, in a figure, is the history of European civilization.

Meeting one another as conflicting tribes in lands that narrowed westward, making their ways along the promontories until they came to the inevitable open water,

Influence of the indented coast.

[1] See H. J. Fleure, ' Ancient Wales—anthropological evidences ', *Trans. Roy. Soc. of Cymmrodorion*, 1915–16, p. 75 (1916), and H. J. Fleure and L. Winstanley, ' Anthropology and our Older Histories ', *Journ. Roy. Anthrop. Inst.*, vol. xlviii, p. 155 (1918). These papers contain much valuable discussion of early immigrations into Ireland

fashioning boats and going forth to occupy, not only new shores, but unexpected isles, the men whom we call primitive carried their practical arts and their ideals of culture from harbour to harbour of the indented coast. We group successive waves of humanity together as palaeolithic, neolithic, and so forth ; but it is difficult to conceive the length of time required for the establishment of any of these types as dominant in a given district of the earth. Thanks to the narrow seas of Europe, the inventions of one group became superposed on groups of diverse origins, without the delay involved in great migrations ; and thus even the folk of the outpost, in prehistoric as well as in historic days, came again and again under eastern influences without being entirely overrun.

The Neolithic settlers.

Can we picture the first arrival of the Mediterraneans, rowing in their light vessels, perhaps scarcely larger than the curraghs of to-day, from ria to ria of Iberia and Armorica ; reaching that other Armorican land of Cornwall ; crossing the great indent of the Bristol Channel ; and finally, from the bleak promontory of Pembroke or the unprofitable sands of Anglesey, descending on the inviolate Irish coast ? The shore itself, with its flats of boulder-loam, which are relics of land that once stretched across the Irish Sea, presented grassy terraces fit for camps and cultivation. Beyond them, the wooded glens harboured no enemies but wild beasts, and the attractive and open moorland at their heads was visible on the skyline from the beach (fig. 3). The short rivers, consequent on the Leinster Chain, were not yet contaminated by inland farms. The water came down, in this temperate climate, freely throughout the year to its sluggish loops among the grasslands, and the noise of its rapids in the ravines led the venturers upwards to the

falls. At the north end of the chain, a fertile lowland stretched away indefinitely, covered with forests of oak and holly. Through its midst ran the Liffey vale as a guiding line for settlement. The Leinster upland, with its freedom of air and sunlight, could here be reached on gently rising slopes at a height of 500 feet above the sea. The rugged dome of Howth commanded the bay, and offered a good post for defence and observation. Charcoal and split bones from primitive hearths can be found in the talus on the edge of its cliffs to-day. We may conceive the existence of a rivalry from the very first between those who occupied the Irish gate at the Liffey mouth and those who, entering by the glens, felt their way towards it through the hills.

From this coast, and probably also from the south, the long-headed neolithic race laid the foundation of the Irish folk. The language that these settlers brought with them from the Mediterranean and from temporary homes in Gaul was no doubt still flexible, and in time it may have received a local tinge in the isolation of the west. We have, however, no knowledge of it at the present day. Various stages of neolithic culture were probably represented among the seamen who reached the Irish coast. These venturers must have brought their women with them ; but from early days strength was gained by intermingling with new arrivals from various European shores. In the course of ages, local habits no doubt grew up in the island. We may regret, from a modern standpoint, that the hunters who sheltered in the narrow caves of Ennis [1] were driven to cannibalism by the stress of hunger or the fervour of religious faith ; but a very long interval separates their primaeval habits from those of

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[1] T. J. Westropp, ' Exploration of the Caves of County Clare ', *Trans. R. Irish Acad.*, vol. xxxiii, p. 71 (1906).

the people, still in the stone age, who met the wave of
broad-headed immigrants from the Baltic. The founding
of homes, the clearing of woodlands, the marking out of
limited areas as the property of something like a clan,
went on through unrecorded ages, with the usual accom-
paniment of jealous misunderstandings and selfish and
ill-considered raids. Bloodshed, murder, and the capture
of women, were no doubt sung as the foundation of
enduring fame, in days when the franchise of a man
could be earned by the mutilation of the slain. Yet in
all these struggles the bonds of association were growing
stronger within the boundaries of the tribe. The talk of
the young men was of warfare and the chase, but the
household year by year was advancing in the arts of
peace. A chief who had earned distinction with the spear
was proud towards the close of life to receive the title
' good ' or ' wise '. The long primary epochs of dissension
prepared the way for coalitions, though in prehistoric
Ireland, as in every other country, sparseness of settle-
ment and difficulties of communication precluded the
formation of a state.

It is too early to say that we possess accurate know-
ledge of the successive immigrations into Ireland. Anthro-
pologists, however, are hard at work in the reconstruction
of prehistoric history.[1] It seems probable, according to
Fleure, that a trading race of dark and fairly broad-
headed Mediterraneans, following on the earlier long-
heads, introduced the building of dolmens, of which
numerous examples occur in Ireland. These megalithic
structures are records alike of religious observances and

The
Dolmen-
builders.

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[1] See especially H. J. Fleure, in the *Oxford Survey of the British
Empire*, vol. i, pp. 298–317 (1914), and ' The Racial History of
the British People ', *Geographical Review* (Amer. Geogr. Soc.),
vol. v, p. 216 (1918).

of veneration for the dead. Just as at Rolde in Holland, and among the cornlands of the Danish isles, so the designers in Ireland often used boulders transported by the glacial ice. In places the site of the dolmen may have been determined by a sense of mystery attaching to the stones. Sometimes the rocks were quarried on a high exposure, and the monument attained dignity, like that at Mount Venus near Dublin, from the natural eminence that it crowned. The position of many dolmens, on the other hand, on low ground and in sheltered places shows that they were often associated with the homestead of a chieftain or the communal holdings of a tribe. Now and then, as in the meadows at the foot of the great dome of Knocknarea, an open area was marked out as a sacred cemetery, and the abundance of megalithic monuments gave rise to the story of a battle,[1] the casually spaced dolmens being held to enshrine the heroes almost where they fell. The element of daring embodied in the construction of a dolmen is nowhere displayed more finely than in the superb example at Ballymascanlan in the county of Louth. If the primitive type reminded the builders of a house, and, by thinking backward, of a cave, design has here progressed some way towards an artist's dream of a cathedral.

The building of dolmens continued into the age of bronze. The great mounds, moreover, of the bronze-age architects cover stone structures of the dolmen type. The solitary megaliths, formed by setting huge slabs on end, represent a more primitive type of art, and for a long time they led to nothing further in the way of stones that point to heaven. Noble examples remain here and there in Ireland, and some may be associated with the first entry of neolithic man.

[1] I owe this suggestion to Professor R. A. S. Macalister.

The building of round towers is also regarded as a Mediterranean feature. The numerous instances in Ireland are undoubtedly of Christian origin ; but the architects of the sixth to the ninth century of our era seem to have revived in connexion with ecclesiastical requirements an earlier and once familiar form.

The bronze-age immigrants.
Somewhere about 1700 B. C. a race of powerful broad-headed invaders reached the outpost, bringing with them the civilization that we associate with the use of bronze. The best clue, however, to their settlements is given by their pottery, and hence, from a particular type of drinking-vessel, they are commonly styled the ' Beaker ' people. Their original home seems to have lain north of the Alps, and they gradually occupied the south side of the Baltic, prevailing over the long-headed ' Nordic ' folk who characterized western Germany and Scandinavia. They moved westward along the easily traversed coastlands that led to the mouths of the Rhine and Scheldt, and they established themselves in England as an important social stratum, to which the neolithic Britons became underlings.[1] In a far less marked degree, they made their impress upon Ireland. They worked the rich deposits of alluvial gold on the east flank of the Leinster Chain into ornaments and objects of fixed weight that came to have the currency of coins. The double spiral patterns marked on the stones of their huge tumuli have been traced from Mycenaean Greece through Scandinavia to the Boyne.[2] Though these

[1] Arthur Keith, Presidential Address, ' The Bronze Age Invaders of Britain ', *Journ. Roy. Anthrop. Inst.*, vol. xlv, p. 12 (1915).

[2] George Coffey, *New Grange (Brugh na Boinne) and other incised tumuli in Ireland : the influence of Crete and the Ægean on the extreme west of Europe in early times* (1912), and *The Bronze Age in Ireland* (1913). R. A. S. Macalister, whose work is always

broad-headed immigrants brought with them new and
fascinating arts, and had gained long experience in
European warfare, they failed in Ireland to produce any
general physical change by mingling with the folk whom
they overran. The long-headed Mediterranean race had
probably already received fair-haired and similarly long-
headed additions from the ' Nordic ' folk on the far side
of the North Sea.[1] Despite the coming of the Beaker
people, the long-headed type prevails to-day throughout
the country.

Some authors are impressed by the fact that the bronze-
age or Beaker type of settler entered Britain without
metallic weapons, and later acquired the use of bronze.
Hence it is urged that these migrants came to us as
traders, and not as a conquering tribe. In Ireland,
however, the relative magnificence of their sepulchral
monuments, compared with those of the neolithic folk
suggests a desire to record something definitely accom-
plished in the land. Though the tumuli of New Grange,
Dowth, and Knowth stand near the port of the Boyne,
they are not the work of merchants bartering for a site,
but of men who held the country and in death proclaimed
themselves as kings.

The language introduced by the Beaker people is now
thought to be ' proto-Celtic ', and to have thus laid

illuminating, would prefer to regard the Irish spirals as an inde-
pendent growth, marking a ruder type of the civilization that
reached a climax in Mycenaean art (' Temair Breg ', *Proc. R. Irish
Acad.*, vol. xxxiv, sect. C, p. 387, 1919).

[1] For a eulogistic appreciation of the Nordic type, see Madison
Grant, *The Passing of the Great Race* (1918). To these long-
headed people, who are characteristic of Scandinavia, the author
assigns an eastern origin, distinct from that of the smaller neolithic
Mediterranean race with which they have been associated by other
writers.

a foundation in Ireland for the Goidelic or Gaelic speech introduced in far later times. Madison Grant [1] holds that ' all the original Celtic-speaking tribes were Nordic ' ; but it is not clear that any Nordic settlers who preceded the Beaker people had acquired a Celtic tongue at the early date of their immigrations. E. C. Quiggin [2] wrote in 1910 that the Goidels of 600 to 500 B. C. were ' the first invaders speaking a Celtic language ' who ' set foot in Ireland '.

More than a thousand years after the arrival of the Beaker folk, men skilled in the use of iron broke in upon the outpost. Their chief contribution to Irish civilization was the introduction of the new metal and of what are called the ' La Tène ' designs, which find their type in lake-dwellings at the northern end of the Lake of Neuchâtel. If we call these people Celts, we associate them with the vigorous round-headed folk, tall and possibly fair-haired,[3] who spread from Alpine Europe, that is, from a mountainous district lying somewhat to the south of the homeland of the Beaker people. It is more likely, however, that the iron-age invaders of Ireland were a long-headed group that had felt the pressure of the Alpine folk. They formed, as it were, the outer fringe of the expansion from Gallic lands that made itself felt, some centuries later, in menacing descents on Rome. Madison Grant [4] holds that these tribes were Nordic, and he places their arrival in Britain no earlier than 800 B. C. Fleure [5] believes that the Brythonic-Celtic language reached south-eastern England not much before the invasion of the Belgae—perhaps, then, about 300 B. C.

[1] *Op. cit.*, p. 175.
[2] *Encyclopaedia Britannica*, vol. xiv, p. 757 (1910).
[3] A brunet type of ' Celt ' is, however, recognized in the Bavarian district. [4] *Op. cit.*, p. 175.
[5] *Op. cit., Geographical Review*, vol. v, p. 227 (1918).

Between these dates we may place the adoption of the Goidelic or Gaelic language by the Irish folk.

A Goidelic race cannot be separately recognized, and we cannot assert with any confidence that there are 'Gaels' or 'Celts' in Ireland. It is suggested that the 'Goidels' whom Quiggin mentions entered Ireland across Scotland, after a considerable period of residence in that country. It must be admitted that great uncertainty enshrouds the Irish language-question; but we may conclude that the introduction of Gaelic is contemporary with the arrival of men who could support their culture by the use of iron weapons. In about the sixth century before our era, something new in the way of customs— and even language is a custom—arrived from Europe to the outpost, and for seventeen hundred years loosely banded groups of tribesmen, whom we cannot describe as Celts or Gaels, remained united in this one thing, the acceptance of a Gaelic mould.

The traditions of the bronze and neolithic ages that were handed down under Gaelic influences during the age of iron would naturally impute a 'Celtic' social system to those far more primitive times. The earlier Irish population was never replaced by later settlers to the extent that broad-headed immigrants replaced the Mediterraneans in south-eastern England.[1] Mentally, however, the Irish people remained plastic and receptive, and the most profound impression was produced by the invaders of the age of iron. The Gaelic question in Ireland is one of the best examples of the impossibility of making language a test of nationality or race.

No anthropologist nowadays will support the contrast alleged to exist between 'Celts' and 'Teutons', with

[1] H. J. Fleure, *op. cit.*, *Geographical Review*, vol. v, p. 227 (1918).

all the boastful controversies that have clustered on both sides round these terms.[1] The very names have been used so indefinitely, and have been applied to such varied racial groups, that they may well be abandoned by those who strive for accurate conceptions. There is a glamour yet in a ' Celtic ' twilight and a thrill of hope deferred in the promise of a ' Celtic ' dawn ; but the Irish qualities of imaginative insight, leading to a warm sympathy coupled with a shrewd perception, and the power of unbroken persistence against a sea of troubles, date back far beyond the clan-system of Gaelic days. Though these qualities were doubtless specialized and intensified by isolated conditions in the outpost, they reached us with the men who sailed from the Mediterranean and who first opened up the forest-lands to the waves of European immigration.

If the Gaelic habit spread comparatively rapidly in Ireland among the southern representatives of the Mediterranean race, some credit must be given to those who introduced it from abroad. Tacitus, tired of Rome, and ready to support the myth of the noble savage, records the acceptance by British gentlemen of Roman speech and Roman manners as a degradation and a mark of servitude. Far more probably, it was a response to their just and friendly treatment by Agricola, and by his master Vespasian, who had met and respected them in the field. The Anglo-Saxon tongue, on the other hand, held its own against Norman French in England, and Chaucer, the poet of a civil service that had changed little since the Angevins, wrote in the vulgar language that remained prevalent and that was, in the fourteenth

[1] For the modern point of view, see the critical essay by A. Keith, ' The Ethnology of Scotland ', *Nature*, vol. c, p. 85 (1917).

century, perforce accepted in the schools. An opposite example is found in the spread of Arabic speech through northern Africa by a comparatively small number of militant invaders ; and this may be traced to the enforcement of an Arab religion by the imminence of slavery and the sword. It is reasonable, then, to believe that an imported language spreads with the culture, and especially with the religious observances, that it represents. As we have already hinted, there may have been something in ' proto-Celtic ' and ' Celtic ' customs, and in ' Celtic ' opinions on the afterworld, that appealed to the Mediterraneans, whose gods had deserted them in the outpost at the coming of the iron spears. Even the terminology of Irish townlands owes its present appeal and beauty to expression in a Goidelic form. If we knew the earlier tongue of Ireland, it might be interesting to trace translations, and perhaps unintelligent corruptions, of Mediterranean or Nordic place-names. Such grotesque forms as the English 'Booterstown' and 'Stillorgan', with which we may compare the twentieth-century ' Wipers ', may have had their prototypes during Gaelic penetration into Ireland.

The evolution of ' Celtic ' civilization moved slowly in the island, and century after century of the resonant age of iron saw very little change in the material advancement of the clans. It has often been remarked that the epoch of Connaire and Cuchullain, when heroes fought in chariots and a strong man matched himself against an army at the ford, belongs to the Homeric stage of European culture. The same culture prevailed in Britain down to the coming of the Romans, and it is interesting to remember that, if communications had been more easy, Queen Medb might have entertained Caesar Augustus in her palace at Rathcroghan, while the fame of Finn MacCumhail might have added to the apprehensions of Aurelian.

IV. IRELAND AND THE ROMAN WORLD

THE Romans, who easily crossed the 'sharpe narrow
sea' of the Strait of Dover, were deterred from land-
ing as invaders on the Irish coast. Tacitus, in a
well-known passage,[1] describes how his father-in-law,
Cnaeus Julius Agricola, 'garrisoned the coast of
Britain facing Ireland, actuated more by hope than
fear'. Just as the son of the British Cunobelin had
sought the friendship of Gaius Caesar,[2] so some chief,
probably from the Leinster uplands, had come over to
Agricola, in the hope of inviting. the enemy into a dis-
united Ireland. Agricola, equally distinguished as a
general, an admiral, and an administrator, often spoke
of Ireland during his years of retirement in Rome. He
has also some claims as a practical geographer, for he is
said to have been the first to prove conclusively that
Britain was an island.[3] He had seen the Irish coast
from his ships or from the ridges of Snowdonia ; the
exchange of stories of adventure between the naval and
military officers in the mess-rooms of the ports, so well
described by Tacitus, had brought him attractive informa-
tion, and he felt that the cordon which he had drawn
round turbulent Britain was incomplete. The Irish
harbours were better known than those of Britain, since
trade already flourished with the western isle. It is
reasonable to suppose that the gold of Wicklow first drew
Gallic and Iberian merchants to the Irish ports. In his

[1] *Iulii Agricolae Vita*, cap. 24, the Oxford Translation by
W. Hamilton Fyfe.

[2] On Adminius, who is a political type, see Suetonius, *De Vita
Caesarum*, Lib. iv, cap. 44. The true form of the name may have
been Amminus.

[3] Dio Cassius, *Roman History*, Book lxvi, chap. 20.

armchair in Rome, Agricola used to say that a single legion and a few auxiliaries would have sufficed to conquer Ireland, and that he would have used the subdued outpost as a restraint on the liberty of Britain.[1]

The extra legion, however, was not available, though Agricola's great victory in central Caledonia had rendered the northern front secure. It is now somewhat late to regret the exclusion of Ireland from the Roman sphere of influence ; yet we can appreciate what the outpost lost when we see what southern Britain gained. Public institutions, law-courts, artistic villas,[2] were erected, as in colonial Africa, by native benefactors of the State, and we learn that Agricola favoured the development of a local culture in the schools. Under Roman government, Irish education might well have been bilingual, and the travelled sons of princes, who recognized the bonds of kinship through the clan, might have spread among their less fortunate relatives a knowledge of the larger world. The sea-channel, however, proved a bar even to Roman enterprise. The submergence of the platform of boulder-drift between Holyhead and Dublin has much to answer for in Irish history.

The inhabitants of Britain, brought constantly into touch with Europe, learnt the defects as well as the benefits of the Roman scheme of government. The use of sections of the army as a persuasive aid in politics led to troublesome insurrections and even to the choice of local emperors. But we may believe that, when one of these adventurers had removed the trained imperial legions on a continental escapade, the appeal of Romanized Britain for their return was inspired by affection as well

[1] See generally on this epoch C. Oman, *England before the Norman Conquest*, pp. 90, 171, 175, &c. (1910).

[2] Tacitus, *Iulii Agric. Vita*, cap. 21.

as dictated by alarm. During more than three centuries, a people had been raised from the Homeric stage •of culture to citizenship in the first imperial commonwealth. The great untamed wastes of Eurasia, where every warrior was a horseman and owned no settled camp, were now menacing the indented coastlands of the west. Even the Goths in Gaul and Italy fought against the east to main-

Immunity of Ireland.

tain what Rome had been. Ireland, however, excluded by its outpost-situation from the common sympathies and perils of the empire, was not called on in the fifth century to contribute to the struggle of civilization against the Huns.

What Ireland received from Rome came to her unwitting and unwilling. The prosperity of Britain under the empire, of which we have good evidence in the towns that are grouped even against the Roman Wall, was known in the outpost,[1] and tempted the Irish fishermen to become raiders of the western shores. During the exploration of a villa in South Wales, the story of one of their incursions has been traced by the skeletons strewn upon the tesselated floor, as surely and as terribly as on the canvas of a Rochegrosse. Niall of the Nine Hostages, whose family of eight sons enabled him to found two dynasties in Ireland, organized an invading fleet in the

The story of St. Patrick.

critical closing years of the fourth century. In a descent on Bannaventa in the vale of Clyde,[2] a boy and a girl, children of a Roman urban councillor, were carried into slavery and separated in the crowd of captives. The girl was lost sight of in the mountainous west ; the boy was

[1] R. A. S. Macalister (*Proc. R. Irish Acad.*, vol. xxxiv, sect. C, p. 281) points out that Cormac mac Art (A. D. 227–66) sustained his power in Ireland by organizing an army on the Roman model.

[2] Or perhaps, as J. B. Bury believes, on the lower reaches of the Severn (*Life of Saint Patrick*, p. 17, 1905).

sold to a cattle-farmer near the Fochlad forest. The locality remains obscure ; but for six years the young Patricius served an Irish master. When he escaped, it seems probable that a sea-route carried him, not to Britain, but to Gaul. An Irish sea-captain was not sure at that time of a welcome on the harassed British coast. Patrick proceeded to study with St. Germanus of Auxerre, whose name is fittingly recorded in a Cornish church and town. A few years earlier, this vigorous ecclesiastic had successfully combined in Britain both spiritual and military campaigns. He had annihilated the Pelagian heresy in the south, and a menacing army of Picts and Saxons in the midlands.[1] The young Patrick's history would appeal strongly to one who knew the geographical relations of the islands. Rome could now gain a footing in the outpost by nobler means than the imperial arms.

Patrick yearned to be the instrument by which Christian doctrine could be spread among his former captors. A few isolated churches already existed in Ireland, but the opportunity had now come for annexing the very stronghold of the Gaelic faith. Patrick's mission began in A. D. 432, and its rapid success is as much a testimony to his personal character as to the receptive disposition of the Irish chiefs. Without any marked change of manners or relaxation of intertribal feuds, Ireland took to her heart the choicest gift of Rome. Her conversion thus revived the ancient bond with Europe and the Mediterranean. Whatever fate might fall on Britain, Ireland was able to preserve, by the Armorican sea, the *Mare Gallicum*, an open interchange of commerce and ideas with Gaul. King Niall, indeed, was shot by a rival Irishman somewhere near this Gallic Sea, and possibly on the estuary of the Loire.

Christian penetration of Ireland.

[1] See Oman, *op. cit.*, p. 196.

While St. Patrick and his followers were carrying out their peaceful work in Ireland, the heathen Saxons landed in the Isle of Thanet ; away in the north, they captured Joyous Gard, the refuge of Iseult of Ireland, and they ravaged the shores of Britain from Northumbria to the Thames. The historian John Richard Green invites the happily mixed race of modern Englishmen to regard as sacred the spot that ' first felt the tread of English feet ' ;[1] but the arrival of these ruthless ' Teutons ' of the old Nordic stock was for long a blessing much disguised.

Devastation of England. Green gives a frank and terrible picture of the war of extermination carried on by them with German thoroughness for the next two hundred years. It ended in the destruction of all that Rome had stood for, from Anderida, the fort that watched the narrow sea, to Uriconium, the white city at the gates of Wales. The internal troubles of Ireland at this period seem small in comparison with the sweep of the barbarians across Britain. In the shelter of the outpost, Roman and even Greek letters remained in the safe-keeping of the Irish monks. Kings who warred freely on their neighbours within the island-sanctuary yet vied with one another in the encouragement of collegiate schools. Before the close of the fifth century, Buithe, returning from Italy, founded north of Drogheda the ' Monasterboice ' that still records his name. In A. D. 548, when the West Saxons were pushing towards

Scholarship in the shelter of the outpost. the great ringed forts on Salisbury Plain, St. Ciaran planted the first post of Clonmacnoise on a promontory of the central Shannon, and was helped in his pious task by a prince destined for the kingship. St. Kevin, himself of royal blood, was forced towards the end of the sixth century to transform his retreat among the Leinster glens into a populous seat of learning. He had still some

[1] A Short History of the English People, chap. I, section ii.

years to live, as the respected principal of the school of Glendalough, when, on the opposite side of the channel, Æthelfrith stormed the Romano-British town of Chester, and 1,200 unarmed monks, representatives of the culture of the epoch, were slain on the open meadows of the Dee in a vain appeal for miraculous intervention.

The events of 1914 to 1919 have thrown a vivid light on the conditions of life in the outpost in the fifth, sixth, and seventh centuries. Undisturbed by the crash of European governments, the Irish scholars were free to develop an exquisite taste in illuminated manuscripts and a liberal cultivation of literary arts. The death-struggle of the Christian church in Britain left them without competitors in missionary zeal. Latin, the language of cultivated Europe, had been preserved in Ireland as a medium of intercourse with foreign lands. Heroic monks now went forth to meet the heathen wave, and even to check it at its source. Columba, from his monastery of Iona among the foam-swept Hebrid isles, had penetrated the highland country of the Picts, and Columban had revived Christianity in the forest-lands of eastern Gaul, before Augustine, in A. D. 597, sought the conversion of the Angles, and brought once more across the narrow sea the message of immortal Rome.

V. THE HARBOURS OF THE NORTHMEN AND THE NORMANS

In the ninth century, the Anglo-Saxons and the Irish, united now by a common religious culture, became alike threatened by the great expansion from Scandinavia. The sea-rovers of the antique Nordic stock, who may be classed together as Northmen, appeared at first as ruthless pirates, weary of confinement in their narrow viks

Expansion of the Northmen.

and fjords ; but they showed in the end an unexpected
genius for settlement and ordered rule. Facilities for
trade in the Baltic region had no doubt already influenced
the Northmen of the Swedish coast. The leaders who
were invited to Novgorod, who organized the strength
of Russia, and who met in a few years at Kiev the civiliza-
tion of the eastern empire, had acquired a larger outlook
than that of the raiders who first attacked the Irish
shores. The British Isles lay full in the track of the
ruder migrations from the west of Norway. Away in
the north the rovers harried Iceland, which had seemed
a safe retreat for a colony of Irish monks. They crossed
repeatedly to Greenland, much as their descendants do
in trading vessels from Tromsö at the present day. But
in England and Ireland the Vikings came across monastic
centres that seemed to them veritable treasure-houses.
The wants of a raiding-party were often amply satisfied
by the brutal murder of a community of churchmen and
the rifling of the chests that held the gifts of kings. The
islets, outposts of the outpost, where the chant of lauds
and evensong was answered only by the crying of sea-
birds, now seemed jettisoned of God in a sea that swirled
with devilry. Even the Skelligs off the west of Kerry,
with their perilous approaches cut in the rock-face, were
sacked by pirates who had scaled Torghatten or the
Lofotens. The sight of beehive-cells and the steep stone
roofs of churches attracted the rovers to the harbour-
heads. They discovered St. Finnbarr's town on the
marshland in the estuary of the Lee ; they sailed up the
drowned valley of the Shannon, the Luimneach,[1] and
rifled St. Mainchin's church on an ill-defended isle. The
spacious western sea offered them a certain safeguard ;

[1] T. J. Westropp, ' The Antiquities of Limerick and its Neigh-
bourhood ', *Roy. Soc. Antiquaries of Ireland*, p. 7 (1916).

but Ulster no longer kept a navy, and the strangers came through the narrows and seized the shores of Dublin Bay. Here they held the true and European gate of Ireland, and from it, in successive descents, they harried the villages in the plain. The unimportant group of wattled houses at the first ford on the Liffey was soon converted into a stronghold by the Northmen, who built their castle upon rising ground just above the anchorage of the ships. The name of Dublin, derived from the black pool of the river, has ever since been associated with the settlement and dominance of strangers.[1] In spite of many attempts made by the plainsmen to eject them, the Scandinavians here founded an abiding city, which passed in 1170 into the hands of their Norman relatives, and not into those of the representatives of central rule in Ireland. Scandinavian Dublin, by virtue of its control of the great harbour opening to the east, thus held its own for more than three centuries, and for 156 years after the disastrous but indecisive battle of Clontarf. Hlimrek (Limerick) on the Shannon has almost the same history ; the city, founded by sea-power, was walled against enemies on the landward side. Carlingford, commanding the drowned valley of the Newry River ; Wexford (the White Fjord) on the broad white water at the Slaney mouth ; and Waterford, with its sheltered anchorage far in among the hills, recall in their names the grip of the Northmen upon Irish harbours and their development of external trade. The Portuguese, Dutch, and English settlements in the Indies afford many later parallels with this chain of alien towns in Ireland. When, however, we use the words ' stranger ' and ' alien ', let us remember that the strangers of one century may

Founding of Dublin.

Norse towns in Ireland.

[1] See the historical account in S. A. O. Fitzpatrick, *Dublin*, Ancient Cities Series (1907).

become the strength of a people in the next, and that the mixed race of modern Irishmen owes more elements than it is ready to acknowledge to the process of ethnic diffusion through its eastern gates.

In estimating the strength of the Scandinavian cities in the outpost in the tenth and eleventh centuries, we should note that the Irish clansmen were no longer struggling against isolated groups of raiders, but against an organized force that had made its mark in Europe. The Dublin that was attacked by Brian from his western kingdom on the Shannon was, so far as reinforcements went, a salient of the greater Denmark. Three years after the battle of Clontarf, Knut the Great, a Christian like his kinsmen in Dublin, became master of the whole of England, identified himself with his subjects as a generous ruler, and kept the peace among them during a reign of twenty years.

The chain of Scandinavian ports was broken in the twelfth century by the Anglo-Normans, who forged it again for their own advantage from within the island, connexions being now established by cross-routes through the plain. The harbours that were visited by Gallic and Phoenician traders, and colonized by the valour and the civic virtues of the Northmen, proved, as time went on, essential to the safety of the Anglo-Norman state.

Impor-
tance
of the
harbours
to the
English
realm.

Henry II spent most of his life upon the Continent, unwilling to admit that his real domain lay westward of the narrow sea. Yet he recognized the close relations of the outlying islands of his realm, and ' by his power England, Scotland, and Ireland were brought to some vague acknowledgment of a common suzerain lord, and the foundations laid of the United Kingdom of Great Britain and Ireland '.[1] In proportion as England relaxed

[1] Alice S. Green, *Henry the Second*, p. 1 (1892).

her larger claims and was driven out of France, so she was inevitably urged to assert her hold on Ireland. The great development of navies in the English Channel from the time of Edward III to that of Henry V turned the thoughts of statesmen keenly to the harbours of the outpost. The unknown author of the propagandist poem 'The Libelle of Englyshe Polycye', which was circulated in 1436,[1] puts the matter very plainly. He had seen the triumph of the armies of the Maid, the defection of Burgundy, the loss of Maine and Anjou, and he looked on Calais as a sort of Gibraltar, the guardian lion of the Dover Strait. 'English John Talbot' had been withdrawn from his difficult duties as viceroy of Ireland to spend the last years of his life on the fighting front in France. But the author of the 'Libelle' knew that danger might lurk also on the western shore, where Ireland was to him 'a boterasse and a poste'. In times when ships had come to hold the balance among the powers of the Atlantic seaboard, the English king must be *Dominus Hiberniae* in fact as well as name. No enemy must be allowed to seize the harbours of the European outpost. It is hard to realize that much of the advice thus given still remains applicable after an interval of five hundred years. The author remarks with truth, 'I knowe with Irland howe it stant', and he tells us that his information came direct from the viceroy Ormond.

> The Yriche men have cause lyke to oures
> Our londe and herres togedre defende,

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[1] *Variorum* text, Thomas Wright, *Political Poems and Songs relating to English History* ('Chronicles and Memorials of Great Britain and Ireland during the Middle Ages', published under the direction of the Master of the Rolls), vol. ii, pp. xl. and 157 (1861). See also Hakluyt, *Voyages*, Everyman Edition, vol. i, p. 174.

That none enmye shulde hurte ne offende
Yrelonde ne us, but as one comonté
Shulde helpe to kepe welle aboute the see.
Ffor they have havenesse grete and godely bayes,
Sure wyde, and depe, of gode assayes,
Att Waterforde and coostis monye one,
As men seyn in Englande, be there none
Better havenesse shyppes in to ryde,
No more sure for enemyes to abyde.

VI. THE BARRIER OF LEINSTER AND THE IRISH PLAIN

BEFORE the epoch of St. Patrick's mission, the comparative ease of communication across the limestone plain of Ireland had led to the establishment of a general
Tara.   overlord, an *ard-ri*, whose court was held at Tara. This flat-topped eminence, though rising only 500 feet above the sea, commands a wide view of the country, and was no doubt a place for signal-fires and sacrifice before it became the homestead of the kings. It is also significant that Tara is by no means in the centre of the country, but looks across to the Hill of Slane and the noble tumuli on the Boyne.[1] The plateau of Rathcroghan, occupied by the kings of Connaught, would have seemed more suited for the offices of a federal system, and the choice of Tara suggests very old tradition, going back to the times when it guarded the camps of folk who had entered from the eastern sea. In spite of the recognition of an overlordship, the wars between Ulster and Connaught continued, and the hostility of Leinster was intensified

[1] Since these words were written, the important study of Tara by R. A. S. Macalister has appeared, emphasizing a connexion between the remains on the hilltop and New Grange (' Temair Breg', *Proc. R. Irish Acad.*, vol. xxxiv, sect. C, p. 383, 1919).

by the exactions, and perhaps also by the proximity, of
the central power. The whole spirit and policy of Leinster
were dominated by the great chain of granite, 80 miles
in length, that served as a natural fortress, approached
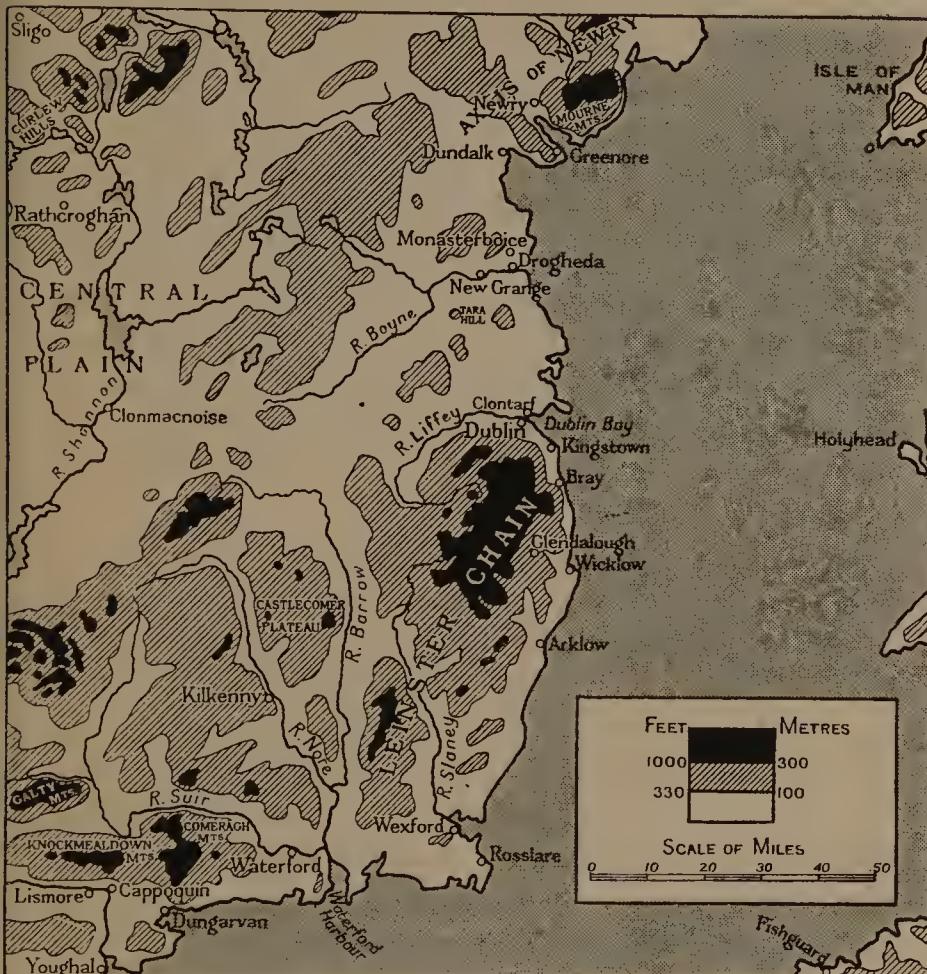
MAP 2. THE LEINSTER CHAIN AND THE GATES OF EASTERN
IRELAND.

only by narrow lateral glens. The rocky walls of these
valleys, with their wooded clefts, provided ambushes
that told strongly in defence (fig. 5). On the eastern
flank, between the moorland and the sea, a fertile strip

of drift-covered land runs from Bray Head down to
Bannow Bay, sheltered from the western storms, and
providing grass for cattle even if the soil is somewhat stiff
for tillage. Over this important coast-land, the men who
held the mountains held also the approaches from the
sea (fig. 3). Landing-parties might be allowed to straggle
up over the meadows ; the flag of the stranger might
wave gaily enough above his tents along the shore ; but
the dissected and difficult country lying inland from
Bray Head cut off his communications with the settled
port of Dublin, and his provisions must be brought
southward to precarious and open harbours on the coast.
The water-parting on the moorland formed a continuous
line for scouting, and even the passes, rising almost to
the summits of the chain, gave the Leinstermen the
advantage that is gained in our time by the observant
forces of the air.

An important economic factor in the early days was
the occurrence in a valley west of Arklow of rich deposits
of alluvial gold. This lay in the controlled zone of the
Leinster foot-hills. Even in 1436, Irish gold was still
known to jewellers in London ; but by that time the
most fruitful gravels had undoubtedly been worked out.
The ' gold rush ' of 1796 hardly paid expenses, though at
the time of its discovery the Wicklow nugget of 22 Troy
ounces (685 grammes) was the largest recorded in the
world.[1] The kings of Leinster, long after the palmy and
prehistoric days of gold-hunting, may well have regarded
themselves as custodians of a special treasury in Ireland.

The energies of these upland people were thus largely

[1] See Gerrard A. Kinahan, ' On the Occurrence and Winning of
Gold in Ireland ', *Journ. R. Geol. Soc. Ireland*, vol. vi, p. 135
(1882), and W. W. Smyth, *Records R. School of Mines*, vol. i,
part 3, p. 400 (1853).

Fig. 3. THE WICKLOW COAST SOUTH OF BRAY HEAD.

Fig. 4. THE SITE OF DUBLIN. From the north end of the Leinster Chain.

influenced by geographical conditions and were generally directed against the more fortunate dwellers in the plainland. Their inborn love of raiding extended from their tribal policy to a choice of alien wives. The famous taxation forced upon them from Tara, and maintained with irritating rigour for fully four hundred years, is said to have been due to an act of treachery to a queen. The alliance with Strongbow and his Cambro-Normans arose from an abduction carried out in the far north-west under the terraced Sligo hills. The men of the barrier of Leinster, sufficient to themselves, gained little sympathy from the cattle-owners of the central plateaus, and in return gave little help towards an organized and effective Ireland. Alliances were sought in Leinster with the invading Northmen, and even Brian's rearguard was attacked in the valley of the Barrow while retiring with the convoys and the wounded from the hard-won victory of Clontarf. Dermot MacMurrogh had invited the Normans into Wexford and Waterford, those old ports of trade with eastern lands ; but, when these towns came perforce under the feudal rule of England, Dublin, as the seat of government, was at once proclaimed the enemy of Leinster.

The hillmen and the dwellers in the plain.

In their attack on Scandinavian Dublin in 1170, the Normans and their temporary allies of Leinster swarmed down the slopes of Slieve Roe, the northern extremity of the granite chain (fig. 4). A little later, the same slopes were watched with some anxiety by citizens whose affairs became more and more controlled by English policy through the gate of Dublin Bay. The massacre of prominent inhabitants of Dublin, while feasting in Cullenswood close to the city on Easter Monday 1209, illustrates the nature of the warfare carried on by the hillmen against those whom they now regarded as intrusive

aliens. Bristol was nominated by the Crown as a sort
of godmother to Dublin, and this city, famous for its
' merchants adventurers ', sent forth further settlers to
sustain the English power. By rounding the salient of
the Leinster range, the Anglo-Normans traversed the
Irish lowland as far as Limerick, and the gap west of
the Galty Mountains and the Ballyhoura Hills became
important in opening up an English route to Cork. This
wide passage among the Armorican ranges has now been
followed by the Great Southern and Western Railway,
the construction of which completes the long history of
The road land-communication between the south-west and the
to the
south-
west. ·
capital of Ireland. The route is obvious enough as far
as Charleville, and runs across the limestone of the plain,
between the Leinster barrier and the Castlecomer plateau
on the east and the Armorican outliers that rise boldly
in Queen's County and Tipperary on the west. The low
limestone country is similarly followed round the end of
the elongated Galty-Ballyhoura dome, until the road
faces the closely-set ranges of the south, where Mallow
now stands upon the Blackwater. Here, however, there
is only one pass to be surmounted. By utilizing a con-
sequent valley descending to the Blackwater, and another
descending southward to the Lee, the road and the railway
cross the Old Red Sandstone arch in a narrow gap only
460 feet above the sea. It is easy to see how the possession
of Dublin by a mobilized force of soldiers, accustomed
to cavalry excursions and supported by supplies from
oversea, enabled the Anglo-Normans to enforce their
rule throughout the lower ground of Ireland. Louth,
Meath, Dublin, Kildare, Carlow, Kilkenny, Tipperary,
Limerick, all lay open to them. Most of the higher masses
in these counties are merely islands rising from the plain.
Kerry was held to some extent by the possession of the

Ballyhoura gap, which also gave access to the subsequent valleys stretching east and west, as guiding lines, through Cork. Wexford was easily reached by sea from Dublin, and Waterford, the first prize of Strongbow, became a recognized gateway between Wales and the new domains in the heart of Tipperary.[1] ·

Through all this country Anglo-Norman castles rose, holding the bridge-heads and dominating what may be regarded as clearings in the Irish lands. A century earlier, the same system of government by local tyrants had confirmed Norman rule in Wales and England. When terrorism had done its work, the central power could take over the subjugated districts, and an appeal to justice became possible through union under the overlord or king. In Ireland, however, the overlord was far away, and the vices of 'self-determination' were more easily practised by the barons in their separated strongholds. The castles on the margins of the conquered territory were stained by acts of treachery and murder rather than sustained by valour ; and some, like the massive tower of Bunratty,[2] were stormed by infuriated clansmen, were rebuilt under royal authority, were again captured, and remained in Irish hands down to the great rising of 1641.

The castle-builders.

On the other hand, intermarriage with the Irish, and a sense of common interests in the outpost, created milder relations in many regions of the plainland. Even in the barrier of Leinster, a respect grew up between man and man that was fatal to the formal divisions insisted on by English law. When Art MacMurrogh of Leinster

[1] See the list of shires under English jurisdiction as early as King John's reign (1210), in P. W. Joyce, *Short History of Ireland*, p. 288 (1895).

[2] G. U. Macnamara, ' The Antiquities of Limerick, &c.', *Roy. Soc. Antiqu. Ireland*, p. 105 (1916).

married the daughter of a Fitzgerald of Kildare, it is characteristic of the times that the Dublin government, instead of hailing the *entente* and using it to their own advantage, at once confiscated the lady's property in the plainland.

Froissart's story, however, taken down from the lips of a knight whom he met at Eltham, gives a distinctly pleasing picture of life among the tribal Irish. Henry Christead, or Chrystall, or Castide,[1] told the chronicler how he had been carried off by the wild Irish during a skirmish near Dublin, and brought 'into a town and a strong house among the woods, waters, and mires'. His captor was a 'goodly man' named Brian Costerec. They lived together for seven years, and Christead married Brian's daughter. Ultimately—and this makes it probable that the 'town' was somewhere down in Wicklow—the father-in-law was in turn taken prisoner during Art MacMurrogh's attack upon the English in 1394. He was riding the swift horse that, seven years before, had carried Christead too far among the retreating enemy, and Ormond's soldiers recognized it, probably as a favourite whom they had often backed. Brian was given his release on condition that he surrendered Christead and Christead's family, which the old man was very loath to do ; for, says the Englishman, 'he loved me well and my wife his daughter and our children'. It was finally arranged that one of the granddaughters should remain with Brian. Christead settled in Bristol with his wife and his second daughter, who evidently married into England, while the elder sister married in Ireland.

<div style="margin-left:2em; font-size:smaller;">

A story of good-will.

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[1] If we try to transcribe the signatures from ten or twelve business-letters of the twentieth century, we soon come to excuse the mediaeval copyists for their apparent carelessness about names. Christead's story is to be found in Froissart's *Chronicles*, Lord Berners' translation, Globe edition, p. 430.

' And ', Christead went on to say, ' the language of Irish is as ready to me as the English tongue, for I have always continued with my wife and taught my children the same speech.' Christead was in consequence employed by Richard II to instruct the four kings who had submitted themselves, being for a while tired of warfare, in knightly usage and Anglo-Norman manners. One of his duties, characteristically enough, was to introduce class distinctions among the members of the Irish clans. Froissart asked how the war ended in such a friendly fashion, and he received an explanation which should have sunk deeply into the hearts of English statesmen. Richard had appeared in the field under the arms and colours of Edward the Confessor, a saintly prince revered in Ireland. He had not flaunted the ' libbards and flower-de-luces quarterly ', which would have marked him as a European stranger ; and he appealed to the Irish chiefs through bonds of affection in the past. The blockade of the ports by the English had been severe and the show of martial power had been impressive ; but this imaginative touch proved to the western folk that King Richard was ' a good man and of good conscience '.

This may not at first sight seem to be a question of geography ; but it was a recognition of local feeling in the outpost, and feeling not necessarily on English lines. The clash between feudalism and the clan-system, which was illustrated by the arrangement of Richard II's dinner-table at Dublin Castle, was not, however, to be readily smoothed over. Ormond, who spoke Irish fluently, probably understood the situation far better than the new-comers ; but the narrow sea, which had preserved some individuality in Ireland, provided, for good or ill, a highway from the port of Bristol. The ideas

of Bristol, and, through Bristol, of East Anglia, became the dominant ideas of Dublin, and even Richard, five years later, carried the English leopards ' en blason ' into Ireland.[1]

The kings of Ulster and Thomond, as well as Art MacMurrogh of the Leinster hills, submitted to Richard at the close of his first campaign ; but the fighting in Leinster had been stubborn. The English army had landed at Waterford, and moved up the west side of the chain, keeping watch from the Barrow valley on the mouths of the tributary glens. The highland loomed so largely in the strategy of the time that the terms of peace demanded its evacuation, and a promise to that effect was given. War, however, again broke out when the king left Dublin, and MacMurrogh's hillmen swept down on Kilkenny and Kildare. Although the King of England was also *Dominus Hiberniae*, Englishmen for several centuries were able to cultivate their love of adventure on a double fighting front. During Richard's second expedition,[2] a boy named Henry, ' qui estoit bel et jeune bacheler ', earned his spurs amid scenes of devastation at a battle in the Leinster foot-hills. Sixteen years later, we find him riding into London as the hero

The western front for English arms.

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[1] For this he had received much provocation in the meantime. The blazon was noted in Carlow by the author referred to in the next footnote.

[2] The details of this campaign are well known from the metrical account of Jehan Creton, who took part in it ; ' Histoire du Roy d'Angleterre Richard. Composée par un gentilhom'e francois de marque qui fut a la suite dudict Roy. 1399,' Brit. Mus., Harleian MSS., 1319, with illuminated illustrations drawn by or under the direction of the author. For text, translation, and critical notes, see J. Webb, *Archaeologia*, vol. xx, pp. 1–442 (1824). Also P. W. Dillon, *ibid.*, vol. xxviii, pp. 77 and 85, for references to the author, who was ' varlet de chambre ' to Charles VI.

of Harfleur and Azincourt. In Ireland, he experienced
the dangers of a passage across the granite upland in
pursuit of the resourceful highlanders, whose tactics
nearly brought the English army to destruction. The
armour-plated expeditionary force, unaccustomed to the
treachery of mountain-bogs [1] and of bracken deep enough
to hide a foeman, was finally rescued from starvation
in a camp on the eastern shore by food-ships sent from
Dublin. It reached the well-furnished colonial city
overland, probably viewing with some hesitation the
O'Byrnes and the O'Tooles grouped along the skyline
from the Glen of the Downs to the ridge above Kil-
gobbin. Three years later, the struggle between plain
and highland was emphasized in the same critical country,
only twelve miles south-east of the city, and the civic
sword of Dublin records to this day the victory of the
English holders of the gate of Ireland.

Even in the time of Queen Elizabeth, when Drake and
Cavendish circled the globe as harriers of the colonies of
Spain, the slopes of Slieve Roe, five miles from Dublin,
offered a ready refuge to the enemies of England. Lord
Grey was driven back in 1580 from the difficult valley of
Glenmalure, and it is significant that Shakespeare in
1599,[2] when he pictured the return of the troops from
Azincourt, turned the thoughts of his audience towards
an Irish campaign, the issue of which was still uncertain.
The suggested comparison was unfortunate, since, while
the groundlings were applauding in the London theatre,
the army of Essex, retiring from the west, received
a shattering blow at Arklow, between the stubborn
range of Leinster and the sea.

[1] As Creton says, ' qui nest bien songueux . . . il y faut en-
fondrer Jusques aux rains, ou tout dedens entrer'.
[2] *The Life of King Henry the Fifth*, Act v, Prologue, line 30.

Down to the bitter days of 1798, the Leinster glens were the shelter of all who took to the heather in defiance of common government centred in the port of Dublin. The famous Military Road, from Rathfarnham to the valley where the Aughrim River provides a passage through the hills, was constructed in 1800 to hold the heads of the glens, and to gather, as it were, on the uplands the whispers of the secret woods. It runs along the uninhabited watershed, descending here and there to convenient intersections with roads coming up the consequent valleys from the sea. The barrack-forts that were built at these strategic points became, in happier times, first police-stations and then ruins ; but a traverse of the half-abandoned highway still gives reality and explanation to much of Irish history.

The story of the Leinster Chain in its relation to the lowlands seems crowded with episodes of war. The destruction of prosperous towns and monasteries by various raiders in the thirteenth and fourteenth centuries shows, however, that there were intervals in which prosperity might be gained. The quarrels among the Anglo-Norman barons, who took advantage of the comparative remoteness of the outpost, are responsible for many acts of devastation ; and the Irish chiefs, especially in the west, were only too ready to maintain their ancient animosities by alliances with the castle-builders of the plain. Ringed about by the sea, and untouched by the larger sweep of policy in Europe, Ireland remained a prey to men who assumed, over a few sparsely inhabited counties, the dangerous prerogatives of kings.

The brutalities of war in bygone centuries are usually attributed to the peculiar malignancy of invaders ; but it is fair to remember that all invaders are malignant to the folk whom they overrun. They do not seize on ports

and harbours for the benefit of dwellers in the hinterland, and we may ask if a united Ireland would have been restrained by tenderness and remorse if it had felt a call for national expansion and had settled on the coast of Wales. The spread of conquest inwards from the harbour-heads may be inevitable for the security of the power that holds the shore ; the holding of the shore may be inevitable for the security of the homeland of the entering power. The conception of hereditary enmity between peoples may be left to interested politicians; its survival in debates on what is called ' the Irish question ' may be traced, however, to the geographical position of the outpost. The open lands of western Europe have been the scene of so many illogical alarums and excursions, leading to so many loose and variable cross-alliances, that a healthy opportunism has prevailed over the melancholy facts of history. France, for instance, has forgiven the judicial murder of Jeanne d'Arc, as well as the recall of the Bourbons by the coalized kings in 1814. England feels no rancour against the Dutch for the massacre of Amboyna and the humiliating invasion of the Medway. Since the twelfth century, however, the Irish have had to settle their external differences with one power only, whose territory, like a huge breakwater, divides them from the continental turmoil on the east (map 1). Under the more tolerant outlook of the twentieth century, the same geographical conditions should lead to hereditary friendship, and to the recognition of the outpost as a natural link between the continent of Europe and the great English-speaking commonwealths beyond the western sea.

Spread of conquest from the harbours.

Britain as the break-water.

VII. UPLANDS OF THE NORTH

THE north of Ireland is broadly divided into two
regions of very different physical character. The western
of these is distinctly 'Caledonian' (see p. 11). It is
profoundly influenced by the system of folding that was
developed in early Devonian times. The antique sedi-
ments, invaded by granite, now appear as resisting
quartzites and gleaming mica-schists. There is a marked
scarcity of lime throughout the area, and such small
bands of crystalline limestone as occur among these
ancient marine strata are knotty with silicates that have
developed in them, including brown garnets often more
than an inch across. While the quartzites and the
granites provide no arable soil, the orange-brown loams
on the areas of mica-schist are far more inviting to the
settler, and the valley of the River Foyle bears a high
reputation in a region that is notably of a highland type.
Glacial drift here and there ameliorates the surface. The
Foyle opens on a drowned depression occupied by a broad
inlet of the Atlantic, and Moville, on the western side,
has become a calling-station for Canadian liners. The
town of Derry was built round an abbey of the sixth
century, in the oak-woods where the highland country
drops to a fertile band along Lough Foyle. It has been
connected with the English from the close of the sixteenth
century only, and its modern name of Londonderry
records the 'plantation' of the district, mainly by
Scotchmen, in the reign of James I. A predecessor of
the city may be seen in the famous Grianan of Aileach,
a stone fortress 800 feet above the sea, on a hill that
overlooks the route from Lough Swilly to the head of
the shallow harbour of Lough Foyle. Here the O'Neills,

The
valley
of the
Foyle.

as kings of Ulster, founded their palace ' in the sun ',
and held an important passage into the country of their
rivals, the O'Donnells.   All the land to the west is ' Cale-
donian '.   Lough Swilly and Mulroy Bay are picturesque

MAP 3.   THE NORTHERN UPLANDS AND THE RELATIONS OF
IRELAND WITH SCOTLAND.

and sinuous inlets that record the sinking of the coast High-
and the last inflow of the Atlantic on Eurasia.   The roads lands of
from Letterkenny westward to the superbly cliffed coast Donegal.
of Donegal (p. 22) cross the axes of the folding, and they
rise over successive ridges and descend into long glens

stretching to the north-east. The narrow valley of Glen Beagh is in a line with the Great Glen of Scotland. At its south-west end, on a granite upland (fig. 6), a pass leads over to the Gweebarra valley, which continues the same line of European structure down to the estuary north of Glenties.

Here was Tirconnell, the O'Donnells' country; here was the natural shelter of a highland race. Sixteen miles south of the Gweebarra, the O'Donnells, the relatives and perhaps therefore the inveterate antagonists of the O'Neills of Tyrone, looked out from their fortress of Donegal upon a milder and more cultivated land. They carried their raids through O'Ruarc's territory of Breifne among the terraced limestone hills, and in due time came against the Normans, who sought to hold in Sligo the north-west corner of the plain. The O'Conors from the south, renowned for turbulence, held armed encounters with the O'Donnells on a debatable lowland on the seaward side of the Ox Mountains, and the Anglo-Norman power was supported in the open ground between the highland-blocks of Donegal and Connemara by the frequency among the native chieftains of battle, murder, and sudden death. The O'Donnells and the O'Neills, as opportunity served, fought on the English side in their zeal to find an ally against their neighbours ; yet, when concerted action was organized to break the devastating forces of Elizabeth, the west, from Kinsale to Inishowen, looked with well-placed confidence to the mountaineers of Donegal. The name of young Hugh Roe O'Donnell, who twice escaped from Dublin, and who drove back Clifford's army from the Curlew Hills, is enshrined beside those of Robert Bruce and John Hampden as one of the foremost defenders of liberty in our islands.

The Curlew Hills (fig. 7) form a fitting scene for the

Fig. 5.   THE DEVIL'S GLEN IN THE FOOT-HILLS OF
THE LEINSTER CHAIN.

Fig. 6.   IN THE HIGHLANDS OF TIRCONNELL.   Looking
north-eastwards towards Glen Beagh.

last exploit of Red Hugh. They rise gently from the great plainland in which the Shannon wanders ; two of the lakelets that are typical of the limestone region send up arms into valleys of the sandstone range ; but, as we ascend, we realize that this range forms a genuine barrier, and we look northward from its crest into a land of high limestone cliffs and plateaus, crossed on the seaward side by the bare Caledonian ridge that continues the Ox Mountains almost into the wilds of Donegal. The Armorican axis of the Curlew Hills must have been regarded by the hillmen as an advanced rampart, facing the plain, the region of constituted authority, that stretched away to Dublin. The quarrel in this frontier-zone goes farther back than the days when O'Neills and O'Donnells were for once united and made common cause against Elizabeth ; it goes farther back than the march of the mail-clad Normans of Kildare to build their stronghold on the shores of Sligo Bay. Brian of Kincora found it well, in his armed demonstration of 1005, to bring even Danish allies with him across the Curlew Hills as a menace to unconquered Ulster ; and the battle of Drumcliff, arising mainly out of a question of monastic copyright, was fought under Ben Bulben in A. D. 561 (fig. 2). It is noteworthy that even at that early period the men of the north broke the armies of the High King of Tara on the highland margin of Tirconnell.

The central block of Tyrone consists of Caledonian features, including some of the oldest rocks of Ireland. A broad stretch of Old Red Sandstone, yielding richly coloured soils, extends in the south towards Lough Erne ; but the whole region is transitional between the moorlands and the limestone country, and retains much of the wildness of the northern highlands. It is dissected by the numerous tributaries of the Mourne-Strule system,

which drains ultimately into the Foyle, and the life of the people has for centuries been associated with the traffic of the northern ports.

The eastern uplands of Ulster are far more uniform in structure and material than the broken country of the west. A great outpouring of basaltic lavas in Oligocene times covered and preserved the chalk downs, which spread at that remote period far beyond the present limits of the ' white limestone ' of north-eastern Ireland. Sheet after sheet, the basalt has built up gloomy plateaus, the later flows overlapping the earlier ones, and probably extending in the volcanic epoch over a large part of

Tirconnell.[1] Among the massive flows of the later series, one, lying in part at the present sea-level, has become famous as the ' Giant's Causeway '. Its rubbly top has been worn away by the waves, exposing the handsomely columnar lower portion, in which slow cooling and shrinking went on in contact with the ground. Two similar flows, one above the other, give an appearance of titanic architecture to the fine cliffs eastward of the Causeway. A similar occurrence, in basalt of the same age, on the little isle of Staffa north of Iona has given rise to the legend that the Causeway runs beneath the sea to the west of Mull ; and we may well believe that St. Columba or some one of his company was responsible for an observation that suggested to the Irish missionaries a link between the Hebrides and the homeland.

The great basaltic plateaus have been bent and lowered by far later earth-movements, so as to form the basin of Lough Neagh, the largest lake in the British Islands. East and west of the lake, they rise to heights of more than 1,000 feet, and their upturned edges form a for-

[1] See J. R. Kilroe in *Memoir Geol. Surv. Ireland* on ' The Inter-basaltic Rocks of North-East Ireland ', p. 120 (1912).

bidding scarp facing eastward over Belfast Lough and westward over the flat of raised marine clay along Lough Foyle.   This scarp is one of the great features of the north, and the grim black lavas are strikingly contrasted with the thin white band of chalk and the red slopes of Triassic strata that underlie the volcanic series.

The streams that notch the plateaus on their eastern side have produced deep and sheltered valleys, young in all their features, from their cliffed walls to the waterfalls that echo in their floors.   These are the well-remembered Glens of Antrim.   The prevalent note of Moira O'Neill's verse [1] is the longing to be back among them.   Almost within sound of the machinery of busy mills and the clang of hammers in the shipyards of Belfast, these wooded vales lead up into an older Ireland.   Small white farmhouses are scattered on this inland region, like those that spot the landscape in the south and west ; on the higher terraces the heather spreads over miles of old and desiccating mountain-bog.   Here and there a half-obliterated track, perhaps a path of foray or of pilgrimage to the more favoured valley of the Lagan, runs across the basaltic plateau.   In places it is marked by a line of ancient thorn-trees, bent over in an easterly direction by the wind.   It still serves the workers from the mines of iron ore and bauxite when they cross the upland on a visit to their relatives in the glens.

The older faith of Ireland, strong through centuries of persecution, lingers here in the heart of north-east Ulster. The MacDonnells of the glens, however, were looked on by their neighbours in the sixteenth century as an alien race, since they had recently returned, under the name of Scots, as an overflow from settlements in the Hebrides. Yet, as is well known, the Scots were originally an Irish

<div style="text-align: right">The Glens of Antrim.</div>

. [1] *Songs of the Glens of Antrim,* seventh impression, 1901.

folk, who had migrated a thousand years before, and had ultimately given their name to the Pictish and possibly ' proto-Celtic ' lands of Caledonia.

The underlying floor of Antrim is essentially Caledonian. Crumpled strata of Silurian age appear throughout the hummocky fields of Down, and they pass under the Mesozoic and Cainozoic beds on the north-west of the Lagan vale. South and east of the great intrusive mass of dolerite that forms Fair Head, gnarled schists and gneisses of pre-Cambrian age are exposed in the region of Glendun. These are a continuation of the promontory of Kintyre (map 3), just as the Down country is a continuation of the Southern Uplands of Scotland. The grand cliffed headland, terminating in the Mull of Kintyre, is conspicuous from the Antrim coast, and it forms one of the finest features of the landscape on the descent through Glenariff from the plateaus of Parkmore. Islay and the twin domes of the Paps of Jura are visible across Rathlin Island from the basaltic cliffs of Ballintoy. The coast of Caledonia must have been well known to fishermen and sea-captains before the first colonists from Ireland entered its fjords in the second century of our era. The territorial name Dalriada became common to north-east Ireland and the Hebrides, and Fergus MacErc, in A. D. 503, transferred a well-appointed army of Scots from Ulster to the Caledonian shore. It is uncertain whether the Gaelic language was thus introduced from Ireland into its present stronghold in the Scottish highlands, or whether the settlement of the Scots was to some degree assisted by the presence of a kindred speech. The invading Scots, however, had been trained and already Christianized in Ireland ; they planted their culture in the more savage region of the Picts ; and in due time, as the dominant race in Caledonia, they met the Anglo-Saxon elements

along the through-valley of the Clyde and Forth. Many
of their earlier characteristics became concealed by
minglings with the lowlanders, and by a response to
European influences, notably from France. The open
gateway of the Forth gave them an outlook on the
Continent, and the courtly knights of Paris, Dijon, or
Châlons were induced by royal alliances to share a rude
commissariat in campaigns against the English in the
Cheviots.[1] Though the Stewarts or Stuarts, who gave,
through James VI, a royal house to the United Kingdom,
were of Norman and English stock, many ruling families
of Scotland in the feudal days could trace their ancestry
to the Scots who came from Ireland. The long-drowned
valleys, and the promontories and islands of the sunken
Caledonian coast, which offer such a tempting prospect
from the uplands of the Irish north, are responsible for
a chain of events that deeply affected western Europe.

The final balance between subsidence and uplift that The
left the fjords of Scotland flooded and Ireland cut off as Belfast
an island allowed the sea to remain in the broad estuary country.
of the Lagan. Belfast Lough, however, for many centuries
played little part in the development of Ireland. The
great dike of dolerite that runs out from the shore at
Carrickfergus offered a natural site for a castle that
would command both the inlet and the track along the
coast. The stronghold placed here by the De Lacys
records the northerly extension of the Norman pale of
Dublin. The upland country at its back remained
essentially inimical to England, and the inroads of the
MacDonnells from the Hebrides rendered it all the more
necessary for the dominant power to hold the bay.
Belfast, however, continued unimportant, and the town

[1] See Froissart on the hardships of the expedition under
Admiral Jean de Vienne.

was actually occupied by the O'Neills in the perilous struggles of the sixteenth century. This great industrial city owes its prosperity to the development of the linen trade and to the general growth of mechanical arts since the opening of the nineteenth century. The proximity of the coalfields in Ayrshire and on the Solway Firth has neutralized the scarcity of local supplies, and has even held back the exploration of the Tyrone coalfield, only 30 miles away in Ireland. The long sites for quays and shipyards on the sheltered inlet have favoured ship-building from 1854 onwards, and the artisan population, largely drawn from the Scottish lowlands through the Stuart plantation of the north, has proved an apt rival to that along the estuary of the Clyde. In many ways, whether we regard the MacDonnells of the Isles, who have become MacDonnells of the Antrim glens, or the capable and methodical artisans who form the very foundation of industry in Belfast, or the energetic workers of small farms throughout the tumbled lands of Down, we must admit that north-eastern Ulster to-day resembles a colony of Scotland. The geological map of the British Isles [1] presents a graphic picture of the conditions that have given to the majority of the inhabitants of this area a special point of view. To them the outlook is naturally eastward, and their separate attitude in regard to the rest of Ireland cannot be ascribed to mere perversity.

[1] The structure is well shown on the coloured geological map of the British Isles, 1 inch to 25 miles, published by the Ordnance Survey for the Geological Survey of Great Britain, price 2s. This map deserves to be more widely known beyond our educational institutions. See also the coloured map in *The Oxford Survey of the British Empire*, vol. i (1914).

VIII. THE ARMORICAN RANGES OF THE SOUTH

THE geographical conditions of that part of southern Ireland which lies west of the grand scarp of the Comeragh Mountains in the county of Waterford are well worthy of special consideration. The 'Armorican' folding (p. 13), with its axes running fairly east and west, controls the whole of this picturesque and varied region. The subsequent tributaries of the old rivers that came down from the north have worked their way back along the strips of Carboniferous Limestone or Slate that survive between the upfolds of resisting Old Red Sandstone (p. 14). The long strike-valleys remind one of the structure of the Juras ; but connecting cross-cuts or *cluses* are far less frequent in the Irish ranges. The main entry into this country from the plainland is through the low pass south of Mallow, which has already been described (p. 48). Mallow stands upon the Blackwater, already a large stream after its descent from the Kerry border 30 miles farther to the west. The natural outlook for this strategic town is thus eastward along the valley, until, in 43 miles, the sea is reached in the harbour of Dungarvan. The Blackwater, after trenching the Fermoy plateau and traversing the beautiful woodlands at the rocky narrows of Lismore, turns southward by the right-angled bend of Cappoquin, joining at this point the old consequent valley which probably at one time carried the waters of the Suir. The low ground, however, is continued eastward, along the downfold of limestone to the bay.

The drowned valley of the Suir and the sheltered port of Waterford proved much more attractive to adventurers

E

from the sea than the open roadstead of Dungarvan. The
Normans, none the less, planted a castle at Dungarvan,
which became naturally linked with that upon the cliff-
edge at Lismore. In the area now occupied by Fermoy,
considerable additions of glacial drift ameliorate the
Old Red Sandstone uplands and offer attraction to the
cultivator. From Youghal, at the mouth of the conse-
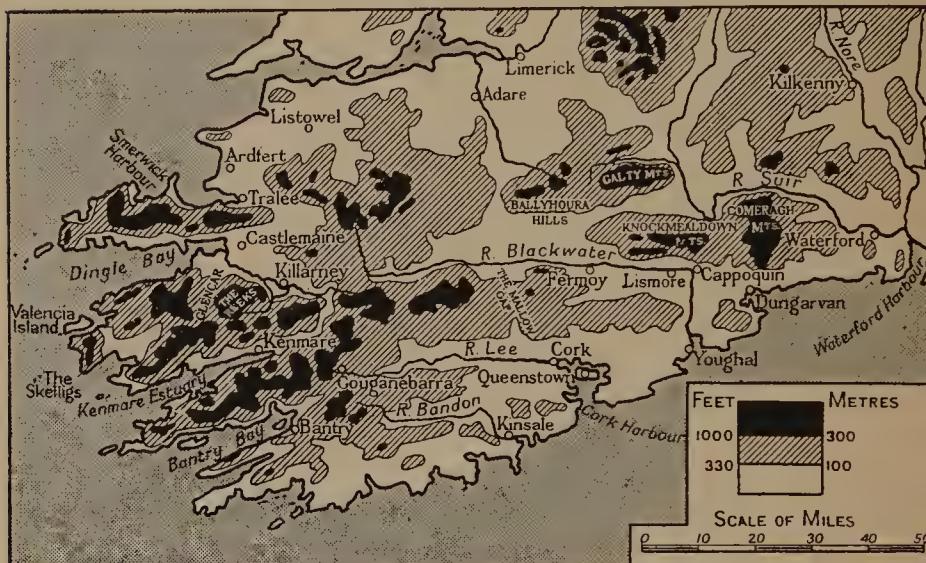
MAP 4.   THE ARMORICAN RANGES OF THE SOUTH.

quent and tidal reach of the Blackwater, another fertile
band of Carboniferous strata stretches westward ; but
this has been worn down by the tributaries of various
transverse streams, and is only a ' through-valley ' of
composite origin. It leads, however, very conveniently
into the drowned valley of the Owennacurra, a stream
flowing south through Midleton, and thence, behind
Great Island, into the similarly drowned terminal of the
Lee. From this point the prolonged subsequent valley
of the Lee provides a route west from the tidal estuary
at Cork to the moors of Gouganebarra, where a narrow
rocky pass in the Old Red Sandstone gives access to

a short valley descending to Bantry Bay. The passage-way across the country thus lies once more from east to west.

Similarly the upper Bandon valley, approached by the sinuous inlet of Kinsale, carries us away westward, until we almost touch the head-waters of the Lee. We are everywhere drawn in the end towards the indented western coast, marked by wide-mouthed rias rather than fjords, into which the storms of the Atlantic can still drive destructive waves.

In such a country, communication with the outer world is naturally by sea. The steamers of Scottish trading companies may still be seen close against the sloping gardens of Kenmare, and the splendid port of Queenstown on Great Island, in these days of steam-navigation, has made the southern Irishman and the southern Irishwoman more familiar with the alien muni-cipality of New York than with the heart of the Britannic commonwealth in London. The harbours of the outpost, which in old times traded with Gaul and the Mediter-ranean, have sent out thousands of the agricultural folk of Cork and Kerry to seek a life in crowded cities in a continent 3,000 miles away. It may be urged that the economic conditions arising from the development of machinery and the growth of factory-towns have reacted in the same way upon the agricultural districts in Eng-land ; but in that country the towns that have absorbed the rural population lie only 50 or 60 miles from the depleted cottage-homes. The labourer from an abandoned farm in Cambridgeshire does not feel himself an exile in Leicester or Northampton. In Ireland, the rents that were demanded rather than obtained, and the consequent evictions that took place before the passage of the land-laws, intensified the distress caused in an agricultural

The lure of trans-atlantic lands.

country by the abolition of protective tariffs. In manufacturing England, a land of coal and iron ores, the readjustment of modes of life was to some extent smoothed over by the higher wages gained in towns. For an Irishman, the towns were in any case those of another country, and the break with home was made when the steamer left the quay. When once the emigrant was outside Cork Harbour, and the familiar green slopes and woodlands lay behind, it mattered little if the foaming race to the Hudson was longer than the coasting saunter to the Thames. For young blood the call was irresistible towards the new lands and new aspirations of the West.

Even now, when co-operation and organized communications have enormously improved the agricultural outlook, and when land, secured under recent acts of reparation, can be sold at greatly enhanced prices, the south-western counties suffer, in comparison with central Ireland, from their geological structure and from the folding of Armorican times. The proportion of barren Old Red Sandstone in the uplands increases as we go west from Helvick Head, and the fertile vales, sheltered though they are, offer in the end but a limited compensation as they die off against the moors. A broad and serviceable lowland, based on limestone, occupies the head of Dingle Bay ; but access to it from the central plain is gained by a narrow pass between the head-waters of the Blackwater and the Flesk. The railway from Mallow to Killarney and Cahersiveen follows this course, clinging to the limestone band ; but the western part of it has to be built up boldly round Old Red Sandstone headlands above the ria of Dingle, to find a pass at Kells and thus to drop down into the Ferta valley. This railway ends at the strategically important station of Valencia Harbour, and communication with the Kenmare

Fertile vales and barren uplands.

FIG. 7. THE CURLEW HILLS FROM THE NORTH-WEST,
with Drumlins in the lowland.

FIG. 8. IN THE KERRY HIGHLANDS. Gap of Dunloe.

inlet across the ends of the spurs of Iveragh and Dun-
kerron is still maintained by road alone. Fifty miles of
driving thus serve to separate rather than to connect the
towns of Kenmare and Cahersiveen. The ria of Kenmare
is continued eastward by the Roughty valley, and along
this a branch railway descends from the Mallow and
Killarney line. The grand and serrated block of Mac-
Gillicuddy's Reeks, and the range that looks down on
the wooded wilderness of Glencar (p. 15), rise between
the routes that run along the coast, and the greater part
of this inland region is uninhabitable (fig. 8).

The wild promontory stretching south-west from
Killarney is typical of the seaboard-land of Kerry. The
eastern boundary of the county is carried along a moor-
land watershed, until it descends into a somewhat milder
district near the Shannon. Even here, the plateau of
Millstone Grit and Coal Measures, rising 1,000 feet above
the sea, faces the east as a forbidding rampart, up which
the road and railway to Listowel climb steeply to the
notch of Barnagh in the scarp. In Kerry the essential
difficulties of Ireland are emphasized and concentrated,
until the county seems an epitome of the outpost. Here
for untold generations the folk have looked westward
from long sea-inlets across diminishing and foam-swept
isles. They have seen the sun set in the Atlantic, and
the brown and cloud-capped ranges have barred them
from Eurasia on the east. The east has sent them the
Norsemen, the Anglo-Normans, and the incomprehensible
and composite people called the English, settlers in the
harbours, builders of castles, but in no sense permeating
the land. The quaint little port of Adare, for example,
seven miles south of the Shannon on the winding channel
of the Maigue, with its noble castle and the abbeys of
three communities, is essentially a creation of the Normans,

Kerry as an epitome of the outpost.

and the wealthy earls of Kildare here held the western front. Beyond that front the older Irish, never adequately welded with their northern kinsfolk as a nation, were pressed towards the Atlantic by successive acts of spoliation. In the Irish hills, as in the Scottish highlands, the breaking down of the clan-system converted the local chieftains into hereditary autocrats whose interest lay now with one and now with another of the ruling parties in the plainland. When an armed adventure ended in disaster, the way was clear for further confiscation by the larger and well-established powers ; and in all fairness let it be remembered that the smallness of a nation is no criterion of virtue, and that the larger powers also have their rights. The dissatisfied dwellers on the indented south-west Irish coast have invited again and again, from Kinsale to Ardfert Bay, the help of strangers overseas. The scenes of destruction in Munster during the risings of the sixteenth century cannot be attributed to exceptional conditions in the outpost or to the special malevolence of its overlords. Material expressions of religious fervour had raged for a thousand years in Christian Europe, and the massacres and penalties that were supported by sectarian zeal in Ireland are paralleled by those that have found their historians in France, Germany, and the Netherlands. Our English schools, however, still await a Motley who will show us Raleigh at Smerwick or at Youghal as plainly as Drake at Cadiz or on Plymouth Hoe. For the geographer, the tragedy of Munster illustrates the spread of continental influences through the open gate of Dublin ; but only the coldness of philosophy will be content to leave the matter there.

IX.   EXITS AND ENTRANCES.   THE RAILWAY MAP OF IRELAND

ENOUGH has been said to show the inevitable relationship of Ireland to the larger and more populous island on the east.   The great extent of agricultural land in Ireland, the growth of her fisheries, the increasing development of dairying and poultry-farming, tend more and more to emphasize the position of her industries as a natural complement to those that are prevalent in England.   Coal can be easily imported for the mechanical trades of Belfast, Dublin, Wexford, and Cork, and the further exploration of the concealed coalfield in Tyrone may add appreciably to Irish home-supplies.   The mining of metallic minerals has suffered the same fluctuations as in Britain ; but a war ranging over a large part of the globe has shown the necessity for keeping in view and registering every possible native source of copper, zinc, lead, and sulphur, to name no rarer substances.   The importance in war-time of the deposits of iron pyrites ('sulphur ore') in the county of Wicklow was pointed out by Warington W. Smyth, in his capacity of Government surveyor, as far back as 1853.[1]

Agricultural industries.

Mineral resources.

Much has been written on the economic relations of Ireland with Great Britain, and the best guarantee of friendly commercial intercourse lies in the frank recognition that neither country can do without the products of its nearest neighbour.   Geological conditions have determined this much for us ; but even within the ruled lines of commerce the human touch is often useful.   Education

[1] 'Mines of Wicklow and Wexford', *Records Roy. School of Mines,* vol. i, part 3, p. 396 (1853).

may be trusted on both sides of the channel to efface the misstatements that still continue to divide, and in time it may be recognized that free communications for Ireland across Britain mean free communications with the parent mainland of Eurasia.

The eastern gates of Ireland have been indicated in preceding pages. Lough Foyle and the drowned inlet of Cork Harbour have served as links with transatlantic lands. Galway Bay, where the limestone plainland is entered by a broad indent of the sea, is regarded by many as a future port for steamers from the United States. The quaint old town of Galway, with its tall castellated houses, remembers fondly its direct trade with Spain, when sailing vessels of 100 tons burthen went round Mizen Head and braved the Atlantic rollers in the Bay of Biscay. A rival project to the Galway route proposes to connect Blacksod Bay in Mayo, where a great barrier of gneiss and granite protects the harbour on the west, with the nearest practicable port in Canada, and thus to open up a new route within our commonwealth to Vancouver, Australia, and the east of Asia.

For these reasons the entrances and exits of Ireland, and the railways connecting them across the country, at present attract the attention of engineers. The gauge used for Irish lines remains, like many things in the outpost, comfortable and insular. Train-ferries, such as are in common use in the Baltic, were held until recently to be impossible in our tidal British seas ; but, during the stress of warfare, many impossibilities have happened in the Strait of Dover. Given a train-ferry to an Irish port, and a slight reduction of the Irish gauge, passengers and goods might be brought uninterruptedly from the mouth of the English Channel tunnel to Galway or to

Blacksod Bay. And, when the linking tunnel is made, a railway-coach might come through to the trans-Irish line from an internationalized station in Constantinople. The rapid development of aerial mail-services will perhaps retard, but will hardly run counter to these schemes. The outpost, the ' boterasse ', has undoubtedly assumed a new geographical importance in the eyes of Europe.

Nor is the issue purely material ; there will always be a touch of romance for the traveller as he comes through Ireland, among the small white homesteads and the strips of farms, where the ploughed land curves over ancestral drumlins of the north ; and alongside the white lakelets, where the peat is cut close against the shores ; and so perhaps to the great limestone scarps of Sligo, and between the desolate moors of Mayo and the sea ; and then to the Atlantic, foaming up against the rampart, now clamorous, now murmuring in content, across the wrecks of half-remembered isles.

The problems of long-distance travellers may be left with confidence in the hands of those who seek to organize our railways under national control, and thus to bring into harmony their many uncorrelated and competing systems. If, however, an experiment in nationalization· is to be made, Ireland offers an obvious and tempting field. In no part of the United Kingdom is there so large a consensus of opinion in favour of unification. It has been well pointed out that the present Irish railway system has been courageously built up in the face of a decreasing population. Nothing but praise can be given to its mail-services, and such inconveniences as occur are due to the uncertainties of communication across the encircling seas. But the railway map of Ireland, viewed as a picture, presents a bewildering number of loose ends, as if the main lines had sent out

The internal railway systems.

feelers that were unable to attain their goals, and had stopped short of their first intention of being useful connexions across country. As a matter of fact, in many cases no such benign intention was in the minds of the designers, since the connexion would have linked their enterprise or lack of enterprise with the service of a rival company. The division of a small region between a large number of privately owned concerns leads to very irritating intervals where transfer from one main line to another should be easy. This absence of correlation is especially noticeable in Belfast, where a wait of four hours between the principal systems is not uncommon. The absence of central stations is as marked as it is in England, though their construction has been in recent years a beneficent feature of continental policy ; but it seems hard to justify the four separate terminal stations of Londonderry, a town containing only 40,000 people, or the singularly broken nature of the links that might connect the lines of three great companies from Waterford, Galway, Dublin, and Belfast in the hillside village of Collooney.

Sometimes for economic reasons when opposed by natural obstacles, and sometimes, it would seem, from pure indifference, the railways in the outpost have neglected the interests of a number of provincial towns. The boldly conceived Wicklow and Wexford route, through the tunnels of Bray Head and across the open drift-land south of Greystones, planted its stations on the precarious sea-front, some miles from the places that they are supposed to serve. An early scheme for running direct from Dublin to Cavan along the line of the old coach-road through Virginia had to be abandoned, and the Silurian upland south-east of Cavan is now hesitatingly approached by two antennae, one reaching Oldcastle and the other Kingscourt. The Great Northern line from

Dublin to Belfast takes the stiff climb across the Caledonian moors north of Dundalk ; but it could not descend with the road into the groove of Newry. This progressive port, with its two railway-stations, thus lies on a branch, while Banbridge, farther north, is shorn of the through-traffic of coaching days in favour of a détour to Portadown. While the Midland Railway Company of England now controls the lines in north-east Ulster, the London and North-Western Company has planted a colony on the raised beach of Greenore, and runs its own trains thence to Dundalk station to join the lines for Dublin and Enniskillen. These factors seem opposed to a harmonious local scheme of organization, but not to one embracing the three kingdoms.

When the shrewd Italian immigrant Bianconi ran his first public ' long car ' from Clonmel to Cahir in 1815, he initiated a system that is capable of great development to-day. The motor-coach and the commercial lorry may solve many of the present difficulties of cross-communication in Ireland, but such ventures cannot well be left to uncorrelated private enterprise. As in the Scottish highlands, the rural mail-cars frequently carry passengers, and it now remains to establish a service for the public that shall be attractive by its comfort and shall ply within reasonable hours. Good progress has already been made in this direction along the coastland between Bundoran and Belmullet. The extraordinary improvement in tar-bound road-surfaces in England, as evidenced by the condition of the roads to Folkestone and Dover after the traffic caused by four years' army service, is sure to have its effect in Ireland, and the new engineering may bring many remote villages into easy and economical connexion with their market-towns. Such developments of road-traffic must, however, be co-ordinated with the

Long cars and motor-coaches.

railway time-tables, and here, in the convenient limits of an island, a general control seems indicated.

What the co-operative principle has done so efficiently for Irish farming can be done for Irish transport if the systems of internal communication can be boldly treated as a whole. Movement within the island means also movement to and from the ports. The discussion of the effect in pounds sterling on Irish trade belongs to the economic sphere ; [1] but the effect on human intercourse appeals to all who have felt in the past the restraining pressure of geographic conditions in the outpost.

X. EPILOGUE

THE tenth section of this essay · may be written to suit various tastes : statistically, that is with an eye to economics, which are cold comfort to young hearts ; historically, for which no man or woman has yet found perfect aptitude ; Gaelically, for those who base their ideals on the days when all were the equal sons òf kings ; prophetically, the road where timorous hope winds amid a maze of shell-holes ; or rhetorically, for those whose vision of the wrongs of Ireland obscures the rights of any other nation. The geographer, seeking for the truth, and yet claiming some perception of the imaginative arts, may keep aloof from any of these courses. He knows that the outpost cannot be moved farther from Eurasia except by a reduction of its area on the eastern or European flank. He may rejoice in the open gate of Dublin, or may seek a retreat from controversy in the

[1] See, for instance, C. H. Oldham, ' Town and Country Life and Administration in Ireland ', *Oxford Survey of the British Empire*, vol. i, pp. 447–63 (1914).

shadow of the Wicklow glens. He at least can realize
the inexorable facts of Nature, which have defined the
boundaries of the outpost and the channels of the ' narrow
seas '. Moreover, for the scientific worker, this tenth
section has been already written. The Irish poet A. E.
has stated the position for us, and his note of mingled
pride and hope rings through the outpost as a trumpet-
call : [1]

> We would no Irish sign efface,
> But yet our lips would gladlier hail
> The firstborn of the Coming Race
> Than the last splendour of the Gael.
> No blazoned banner we unfold—
> One charge alone we give to youth,
> Against the sceptred myth to hold
> The golden heresy of truth.

Nothing can be gained by a return to the Gaelic epochs
of aloofness and division, when Queen Medb summoned
the hosts from south and west, and even from the
rocky fortress at the Liffey gate, for the harrying of
Ulster and the destruction of the Red Branch knights.
As recently as 1916, when civilization itself was threatened,
the appeal to centuries of misrepresentation and mis-
understanding gave us once more a western war-front in
the limits of the Anglo-Norman pale. Does the remedy
lie in education, in the growth of technical colleges, or
perchance in the Carnegie libraries that adorn the Irish
villages, combining recreative evenings with an adequate
censorship of books ? The remedy lies, as Thévenin puts
it, not in organized systems, but somewhere in the heart
of man. ' Aimez-vous les uns les autres ! Mais il y
a près de deux mille ans qu'on ne fait plus que répéter
ces choses-là.' [2]

[1] *Collected Poems*, by A. E., p. 230 (1913).
[2] Denis Thévenin, *Civilisation, 1914–17*, p. 271 (1918).

Let us come back to our geography, for the gist of the matter was determined by the latest movements of the European platform and is set down clearly on the map. The gate of Ireland is at Dublin, and the gate stands open to the dawn. Westward stretch the gulfs of the Atlantic ; eastward lie the friendly and the narrow seas.

X

Date Due